

THE ARCHITECTURAL RECORD

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The Fireproof-House Number

of the

Architectural Record

May, 1909



THE ENTIRE ISSUE of the Architectural Record will be devoted to the subject of country and suburban houses built of incombustible materials.

A combination of conditions which have for the past five years been taking on yearly a more serious aspect are fast coming to an issue.

Present indications point to an innovation in the art of home building which promises to be more far-reaching and revolutionary in its effect than was the introduction into business buildings of the metal skeleton construction.

The permanent, imperishable home is no longer a subject for conjecture; it is an established fact, the advantages of which are only beginning to be realized. Its artistic future will depend on the close cooperation, in solving its problems, of architect and engineer. Whatever difficulties of construction are presented will, it is to be hoped, gradually remove the planning and designing of the homes of our great middle class by partly or wholly uninstructed parties. If such proves to be the case, a long stride in the direction of better architecture and building will have been taken.

The subject will be thoroughly presented, both descriptively and pictorially, in the next issue of this journal.

The Architectural Record

Vol. XXV.

APRIL, 1909

No. 4

How to Get a Well-Designed House

(Photos by Floyd E. Baker)

In estimating the value of current architectural work, it is of far more importance to discriminate between houses that are really good in design and houses that are only pretending to be good than it is between those which are really good and those which are obviously bad. The standard of popular taste in relation to domestic architecture has so improved in this country that egregious and perverse architectural aberrations are far less common than they were ten or fifteen years ago; and when they happen to occur they more often serve as warnings than as examples. The well-to-do American who builds a house costing from \$30,000 upwards usually wants a house of some architectural merit. He may not be prepared to make the sacrifices either in money or in arbitrary personal preferences, which are required by the successful attempt to design a really meritorious residence for the particular site he has chosen; but his intentions are good, and he usually selects an architect, who, he has some reason to believe, will give him an architecturally interesting building. Under such circumstances any architect possessed of real ability and of the personal authority which accompanies real ability, can usually obtain from his employer a sufficiently free hand; and if the result is inferior it is more likely

to be the fault of the architect than of the client. The client has acted throughout in good faith. He has intended to build a meritorious and attractive residence, and for that purpose he has called in the assistance of a supposed expert. When, consequently, he fails to get for a residence an interesting and meritorious piece of architectural design, it usually means that he has happened to make a mistake in selecting his architect.

Assuredly the most important act bearing upon his future residence, which an intending builder performs, is that of selecting his architect. The making of such a selection seems to be a comparatively simple matter; but every one who is acquainted with the special and varying abilities of the leading American architectural designers, knows that such is not the case. American architects usually have their special gifts and merits. There are some who have been very successful with office buildings, but whose residences have been comparatively inferior. There are others to whom one would gladly confide the design of a monumental bank-building, but who are unable to do justice to structures, whose merits are necessarily more realistic. Many architects, who could make a brilliant success of city residences, would make a comparative fail-

ure of a house, whose location involved some difficult problems of landscape design, and finally there are wide variations among good architects, all of whom must be pronounced to be successful makers of country residences. Some of them do well with a small and comparatively modest house, but fall down completely when they attempt to design a more pretentious mansion,

tect who is supposed to have some merit or standing as a designer; and whether or not that particular architect is a really good selection for that particular job is, of course, not a matter which receives any consideration. Yet upon this question depends the real success of the house. The building and habitation of a really successful house does more to improve the taste and give meaning



RESIDENCE OF MR. NICHOLAS F. PALMER.

Portchester, N. Y.

while others seem to need a big building and a large appropriation in order to bring out their best qualities. Obviously the ordinary house-builder can hardly be expected to discriminate with any real knowledge and intelligence among such a variety of special qualifications. His selection is usually dictated by some accident of personal acquaintanceship. Either he or some friend of his happens to know an archi-

to the aesthetic standards of its owner than does any single influence of that kind, which can come into his life; and it should be an equally and differently illuminative experience to its architect. On the other hand a house that merely has the appearances of being successful, but which does not represent the best disinterested efforts of its designer is not only comparatively sterilizing to its maker, but it also necessarily limits and

injures the taste of its inhabitants. Such a house may not be aesthetically demoralizing to those, who have a peculiar personal interest in it, but it is usually barren of any edifying results. A family's standard of taste can never be much better than the one which is embodied in the house it inhabits, and when that house lacks any final distinction and propriety of effect, its inhabitants can in other respects rarely rise above the aesthetically commonplace.

mitting the most dangerous mistakes. The success of the failure of a house-builder to obtain an appropriate dwelling depends more than anything else upon the influence and ideas, which have prompted him to select a particular architect, and which subsequently determined his relation to his professional assistant. If those ideas are sound, it may be possible to get a comparatively good house out of a comparatively inferior designer, whereas if



RESIDENCE OF MR. NICHOLAS F. PALMER.

Portchester, N. Y.

Errors in the selection of architects are of course unavoidable because the ordinary house-builder cannot be expected to have any wide knowledge of the peculiar qualifications of different American architects; but there are several ways in which the liability to error can be diminished and the more important of these ways consists of the inculcation among Americans of certain general ideas in respect to house building, which will prevent them from com-

mitting the most dangerous mistakes. The success of the failure of a house-builder to obtain an appropriate dwelling depends more than anything else upon the influence and ideas, which have prompted him to select a particular architect, and which subsequently determined his relation to his professional assistant. If those ideas are sound, it may be possible to get a comparatively good house out of a comparatively inferior designer, whereas if



Dining Room.



Living Hall.

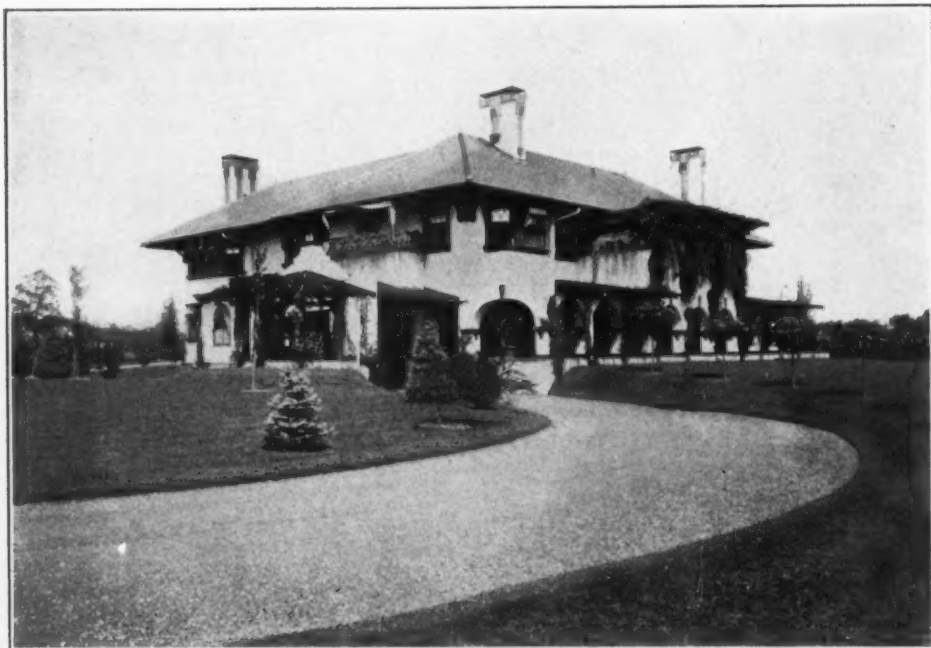
RESIDENCE OF MR. NICHOLAS F. PALMER.

Portchester, N. Y.

on his side to make corresponding demands upon his client. He has a right to ask in the first place for complete confidence in his judgment in respect to all matters of architectural design. If the client is not prepared to grant such confidence, if he has definite and uncompromising ideas of his own as to how he wants his house to look, he should not call in a supposed expert to his assistance. All that he needs is a draftsman and a builder, who are capable and willing to carry out his ideas, but who have no ideas and standards of their own. Unless a man fully intends to place confidence in expert advice, it should not be solicited. Of course, we do not mean that a man by placing confidence in his architect surrenders all right to criticize the design of his house and to suggest changes and emendations. Every architect in his senses is perfectly willing to consult constantly with his client about all matters of detail, aesthetic or otherwise, and to accept emendations which do not interfere with the integrity of his design. But if he is a thoroughly sincere and capable practitioner, he cannot accept any similar modifications in respect to certain essential characteristics of his work. He is not simply an agent, whose duty it is to carry out the ideas of his client. He is a professional expert, whose opinions should have authority in relation to all matters considered by him of fundamental importance. If the house-owner is not prepared to grant him such confidence, he should never have been employed. Before giving any unknown architect a commission, a house-builder should familiarize himself thoroughly with the methods and work of his professional assistant, so that he can be tolerably sure that he is going to get in general a building suitable to his own ideas and tastes, if he has any.

The proper relation between the architect and his client demands, consequently, loyalty on the part of the latter, and, on the part of the former, disinterested and capable service. The whole relation is absolutely falsified in

case the designer has any motive in making and carrying out his design except the motive of placing at the disposal of his client his best expert knowledge and ability, because only on that basis can the confidence of his client be justified. And this consideration brings us to our leading contention. The house-builder, should never employ any one, no matter how great his ability, to design his house, who has any interest in doing anything but his best work. He should not, for instance go to a builder, or a decorator and ask the latter to have the designs of his house prepared because the interest of the builder and the decorator would be, not to give his best professional advice, but in part to make a good profit on the job. Of course, this rule would not apply, as we have already admitted, in case the owner had certain very definite ideas of his own, and merely wished an agent to carry them out. Under such circumstances, he would not require disinterested expert advice. The responsibility for getting what he wanted would rest on his own shoulders; and it would be up to him to see that his agent gave him the value of his money and an architectural embodiment of his ideas. But in all other cases the rule does apply. Wherever the owner is obliged or prefers to delegate the responsibility for getting a suitable house to an expert, it is absolutely essential that the expert in question should have the disinterested motives and the special training of a professional expert. The expert he selects may, no doubt, fall below the proper professional standard, but he should guard against such a possibility by choosing his architect with sufficient care. If his designer is not both disinterested and competent, he loses the great advantage which he may be expected to get from employing expert advice. The object of a designer who is not disinterested is that of making money for himself by pleasing his employer at any cost. He will, consequently, satisfy almost any whim of his employer, no matter how deplorable the effect of the whim upon the



Entrance Drive.



Garden Side.

RESIDENCE OF MR. FRANCIS F. PALMER.

Portchester, N. Y.

general appearance of the building; and if he is a decorator as well as a builder, he will usually spend as much as possible of his employer's money upon the stock, which he himself is in a position to supply. Out of a total appropriation, say of \$50,000, he will inevitably save as much as he can upon construction, in order to spend as much as he can upon the furniture and embellishments, because it is that part

of the responsibility which is rightfully his, and is obliged to subordinate the integrity and the propriety of the whole design, for the benefit of only one part of it—viz, the lavish decoration of certain rooms. The decorator, has, of course, his appropriate function, which is that of carrying out, like any other contractor, the designs of the architects, but in case he is granted any responsibility, except for the conscientious per-



RESIDENCE OF MR. FRANCIS F. PALMER—LIBRARY.
Portchester, N. Y.

of the job, which brings him in his largest profits.

No good, consequently, can come either to individual house-owners or to American domestic architecture from the employment of a decorator to design buildings. The architect must either be master of the whole design and its carrying out, or else, his services should be dispensed with entirely. If the decorator employs the architect, the architect is placed in a situation, which forbids his best work. He is deprived

of the responsibility which is rightfully his, and is obliged to subordinate the integrity and the propriety of the whole design, for the benefit of only one part of it—viz, the lavish decoration of certain rooms. The decorator, has, of course, his appropriate function, which is that of carrying out, like any other contractor, the designs of the architects, but in case he is granted any responsibility, except for the conscientious per-

formance of a specific contract, it becomes a case of the tail wagging the dog. The house-builder, who is not capable of originating his own design—and how many are?—falls into a trap, in case he adopts any other course save that of employing some competent architect, whose work and methods suit him. By employing a decorator he may get a building, which looks to his inexperienced eyes like the real thing but which would be none the less almost necessarily a fraud and a sham.



Dining Room.



Living Hall.

RESIDENCE OF MR. FRANCIS F. PALMER.

Portchester, N. Y.

The practice of entrusting the design of residences to decorating companies is very popular in England, but fortunately it has gained comparatively little headway in this country. Certain conspicuous cases could be named, in which the architectural design of prominent houses has been subordinated to the ideas and interests of some company of decorators; but the practice is, we imagine, on the wane rather than on the increase. As a rule in case decorators are allowed a larger responsibility for the design of the interior of a house than they ought to have, it is the fault of the architect rather than the owner. Nevertheless cases frequently occur, in which house-builders commit the error of entrusting specifically architectural responsibilities to decorative companies which are necessarily devoid of disinterested professional or artistic standards, and whose chief object usually is that of unloading on their employer a large amount of wood-work, furniture, rugs and hangings; and when such cases do occur, they are worth some attention particularly, when, as frequently happens, their work might be confused by inexperienced people with much more architecturally meritorious houses.

The three houses, illustrations of which accompany this article, may be taken as fair illustrations of the sort of thing, which an unsuspecting builder will get when he places himself in the hands of a decorator rather than an architect. These houses all belong to different members of the same family, and are all situated near one another on the same piece of property. They were all designed in the office of the same decorating company, whose employers have obviously placed most liberal appropriations at its service. The designer had, consequently, almost a unique opportunity for a complete and effective scheme of landscape design. He had an opportunity, not merely of connecting the houses one with another, but of tying them together by a suitable layout of the whole place; and this opportunity has been almost entirely neglected. It is natural that an interior

decorating company would fail most completely in arranging for an appropriate landscape treatment, because the out-door part of the work would be least interesting and profitable to the designer; and the company would not save itself from such a failure, even if it called to its assistance a professional landscape architect, because the decorator would have no interest in spending any sufficient fraction of the total appropriation in out-door work. In the instance of the three houses illustrated herewith, the landscape architectural scheme, which should have been most carefully planned and carried out with a considerable expenditure of money has been comparatively neglected. The devices, used by the designer in order to tie the several houses together and make them look well in their natural surroundings are commonplace, trivial and cheap; and the same adjectives apply to the devices, whereby the landscape, in itself very beautiful, is supposed to be made more effective from the entrances of the several houses. The only garden shown in the photographs lacks all propriety of location, or any sufficient definition of treatment, and is almost absurd in its wholly episodic relation to any general landscape scheme.

The designer has sought to obtain unity of architectural effect by giving the three houses the same general character. They are all of them adaptations of the Spanish mission style to the needs of a modern American suburban house in a cold climate. The use of this style is extremely popular in California, where it is supposed to have some local propriety, and it is no wonder that such is the case, because the old Missions combined certain solid architectural merits with an attractive and popular picturesqueness of aspect. But the style cannot be recommended for contemporary suburban houses in a cold climate, because in adapting it to its conditions its merits are mostly lost and its faults emphasized. Its merits consisted in the masses and stretches of solid wall, broken with only a few openings, surmounted by a red tiled roof, and varied by a picturesque



Entrance Drive.



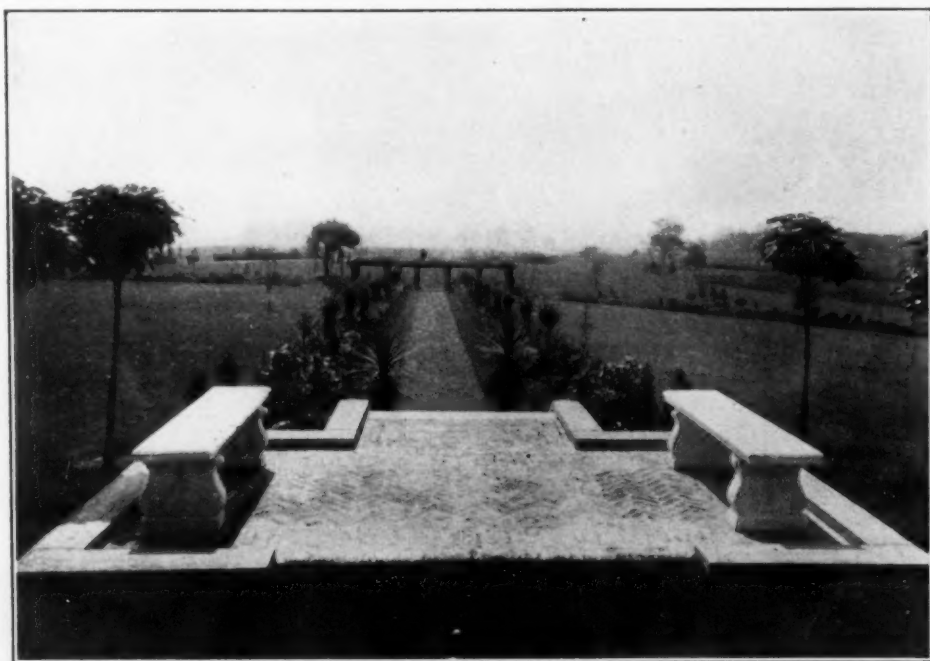
Garden Side.

RESIDENCE OF MR. GEORGE Q. PALMER.

Portchester, N. Y.

bell-tower and the deep shadows of the arcade. They were essentially conventional buildings, which were intended both as a protection and as a retreat from the outer world, and in which simplicity and economy of effect was the result of primitive economical, social and technical conditions. It was inevitable that when the attempt to reproduce this style was made under social and economic conditions, which had

itations of the Mission style are of this character; and so are the houses reproduced herewith. The latter are indeed, a distinct improvement on the majority of their Californian prototypes. It would be going too far to say that they are examples of sheer architectural frivolity, because the designer has used a good deal of intelligence in adapting the forms of mission architecture to the needs of a contemporary American



RESIDENCE OF MR. GEORGE Q. PALMER—DETAIL OF GARDEN.
Portchester, N. Y.

ceased to be primitive, the style itself tended to become sophisticated. The imitation fastened merely on the details and picturesque features of the old Mission buildings and neglected or repudiated the more substantial qualities, which gave those details dignity and propriety. In the place of the solid almost unbroken walls of primitive concrete, there was substituted flimsy plaster constructions, broken necessarily by many windows, and essentially frivolous and restless in architectural feeling. Nearly all the modern Californian im-

suburban residence, and he was shown some originality and taste in decorating his structure with vines and trailing plants. But he was hampered by an essentially false and vicious point of departure. In order to meet the legitimate needs of the inhabitants of the houses, he was obliged to break the wall spaces by openings so numerous and so conspicuous that nothing is left of the solid walls, which gave the mission style its dignity, and with the solid walls should also have disappeared the heavy arches and gables, which were

their natural supplement. Every concession the designer was obliged to make to modern methods and needs—the brick chimneys, the little wooden balconies and porches, the complicated plan, the verandas and the awnings—all these incidents and details violate in their effect the integrity of the original idea; and the best one can say is that the violations have been made, not with perversity and unintelligence, but with some discretion and taste. The

In the design of the interiors, no attempt has been made to stick to the Mission forms. The bare simple woodwork and furniture of that style has been used with some success in many western dwellings, but in the present instance the designer, as soon as he passed the threshold, lost all interest in Mission detail and economy, and indulged in a riot of ostentatious Colonialism. All the rooms in all the houses are finished in white wood, and furn-



RESIDENCE OF MR. GEORGE Q. PALMER—THE FORMAL GARDEN.
Portchester, N. Y.

effect would, however, have been infinitely better, in case the design, while keeping the general aspect of an old Spanish house, had dispensed entirely with the peculiar characteristics of the Mission style. He could have designed a series of white walled red-roofed villas, with details derived from Spanish and Italian Renaissance buildings, which would have avoided entirely the incongruity of effect characteristic of these three houses.

ished in heavy mahogany; and the design of these interiors has the same pretence of adhering to a style as has the design of the exteriors. On the outside an affectation is displayed of Mission simplicity. On the inside there is a similar affectation of Colonial simplicity. But in both cases the pretence cannot disguise the absence of any desire for genuine simplicity and economy of effect. The wood-work is not, indeed, over-wrought with classic detail,

and in some instances the scale of the mouldings and of the panelling is rather too low than too high. But the detail if not over-wrought, is commonplace in appearance and in design. It may well have been designed and made particularly for these rooms; but it looks as if it were supplied out of stock and it has the lack of distinction, which is the usual mark of manufactured wood-work. A Colonial room is nothing at

excessively obtruded or appear to appropriate the room. In every one of these apartments one loses all sense of the whole by a forced preoccupation with the details. The only general effect they give is that of a miscellaneous collection of things. It looks as if the rooms had been designed for the furniture and the hangings, rather than the furniture and the hangings designed or selected for the rooms. The mere



RESIDENCE OF MR. GEORGE Q. PALMER—LIVING HALL.
Portchester, N. Y.

all unless it is expressive of a certain refined simplicity of taste; and refinement and simplicity, cannot be achieved merely by the use of white panelling, classic mouldings and columns. It demands primarily the subordination of everything in and around a room to a total effect derived from an appropriate treatment of the walls, the ceiling, and the more important structural incidents, such as the mantelpiece, the doors and the windows. All the particular pieces of furniture and decoration must find a natural and inevitable place in the total effect and none of them must be

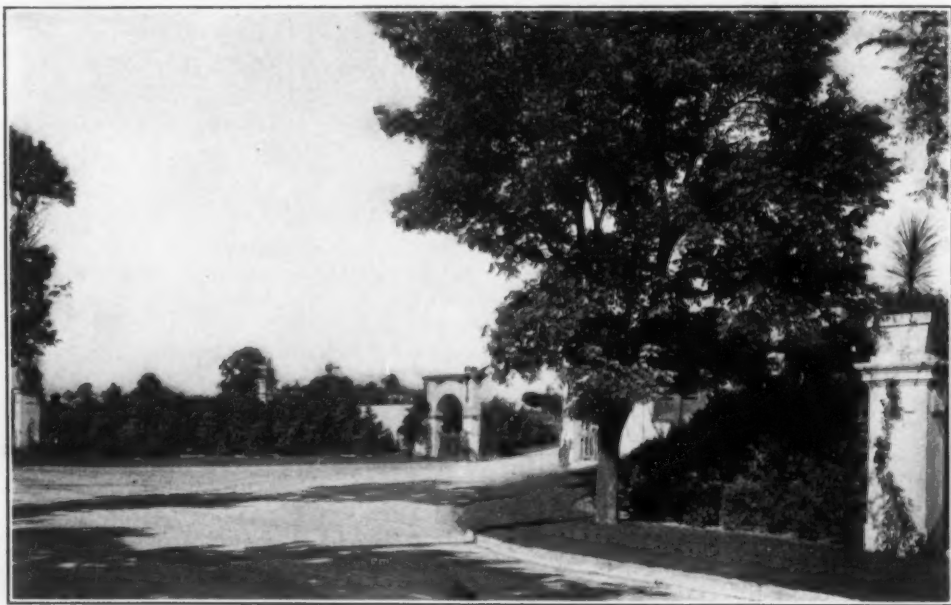
details of the picture absolutely appropriate one's attention—which has been pretty well exhausted by the time it passes from the contents of the room to the room itself, and we do not exaggerate in saying that apartments designed by decorators are usually vitiated by precisely this fault.

Before closing this article, however, the reader must thoroughly understand the spirit in which, and the purposes for which the foregoing criticisms have been made. The houses illustrated herewith have been characterized in plain but carefully discriminated

language. They are not architecturally vicious in the sense that certain Newport and Fifth Avenue houses are vicious. They are not the issue of socially vulgar outlook, or of mere architectural ignorance, perversity or ostentation. Not so many years ago they might have been accepted as decidedly superior to the average dwelling of the same grade. But the standards of dwelling-house design have been rapidly improving, and at the present time these houses, illustrate, not an absence of aesthetic standards, but a dangerous falsification thereof. They illustrate the kind of faults, which every owner is in danger of committing, when a really wholesome relation does not subsist between the client and the architect. These residences are characterized throughout by a total lack of architectural integrity. Professional training has had a hand in their design, but not professional conscience; and this element of conscience will always be lacking, so long as the architect is not an independent expert, who has the recognized authority to impose his ideas in all essential matters upon his clients. When such authority is lacking the result is sure to be more or less of a

hodge-podge; and it is necessarily lacking in the relation between a decorator and his client. The decorator may have as much training and taste as the architect, and on the average he is doubtless just as honest a man; but he is only an agent, without any final authority, and with his profits depending upon his ability to please his employer. He has no professional tradition and standard behind him; and in case he should wish to assert his own personal ideas, he really goes beyond his rights. Thus he inevitably falls into the habit merely of dangling architectural baits before his clients—designed to tickle the latter's palate. Of course many architects are no better; but the point is that an ever larger proportion of architects are attaining the personal and professional independence necessary for personal self-assertion. It is these designers who insist upon building for their clients, houses, which will not merely tickle their aesthetic palates, but will educate and clarify their whole aesthetic outlook. The improvement which is taking place in American architectural design is traceable to these architects and to them only.

William Herbert.



RESIDENCE OF MR. NICHOLAS F. PALMER—ENTRANCE.
Portchester, N. Y.

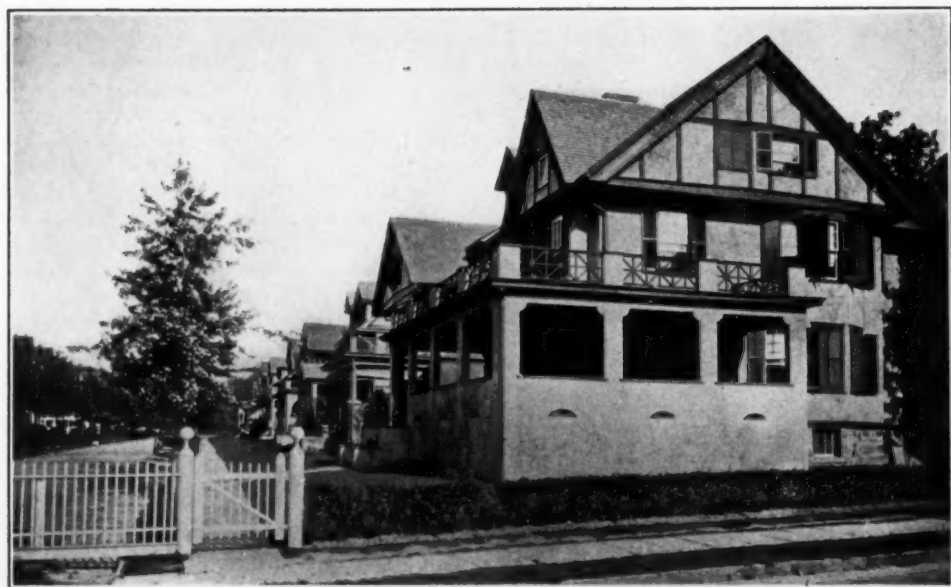


FIG. 1. TYPICAL RESIDENCE BLOCK.

New Rochelle, N. Y.

Charles A. Lupprian, Architect.

Study of a New York Suburb, New Rochelle

(Photos by J. H. Symmons)

A writer in the "Point of View" of Scribner's Magazine, in a recent number of that periodical, made a remark which may perhaps be profitable for reproof and "re" edification. He said that the efforts of the private owners of realty in the suburbs of our great cities, and equally or more in our summer or winter resorts, towards beauty and comity in the aspect of their respective places of abode or sojourn were apt to be nullified by the selfish insistence upon mere conspicuousness and difference of the owners and projectors of the commercial building. Nothing, he went on in effect, is commoner than to come upon a suburb of which the residences express and attest a high degree of refinement and the business buildings a low degree of vulgarity. And thus, quite curiously, it is the local tradesmen, the very class which is most immediately interested in

the prosperity of a place of which the prosperity depends on its picturesque attractiveness, which goes about, in its own erections, to destroy that attractiveness, and to kill the goose which lays the golden eggs.

These reflections might have been suggested by the aspect of New Rochelle. Whether they were or not, they are vividly illustrated by that aspect. Without any striking features of landscape, for an "aequor" of water can no more be called such a feature than a gently undulating surface of land, New Rochelle shares with the other suburbs, its neighbors on the Westchester shore of Long Island Sound, the quiet beauty of the low alluvial coast, and the historic interest which during the Revolution made the Debatable Land one of the most interesting regions of all the thirteen revolted colonies. Cooper's "Spy" was the pre-



Fig. 2. Typical Business Block.
New Rochelle, N. Y.

cursor of a long line of romances, extending down to to-day, which deal with the conditions of this Westchester shore. During the Revolution and even before the Revolution, since this was one of the chief scenes of the irrepressible conflict between strenuous Puritan Yankee and ruminant Arminian Dutchman. And New Rochelle has a special historical interest for having been the goal of the Huguenot migration, which



Fig. 3. A Spotted Piece of Architecture—The
New Rochelle Trust Co.
New Rochelle, N. Y.
F. C. Merry, Architect of Lower Stories.

introduced a special element into the strife, that element, Gallic, however Protestantized, under which Calvinism itself lost half its evil by losing all its cantankerousness.

There is thus every natural and hereditary reason why New Rochelle should be a thoroughly charming suburb, a place to which the commuter should repair with particular alacrity after his day's work was done and spend his evenings with particular delight in what poor Homer Martin used to describe as "the pursuit of his family," and to which he

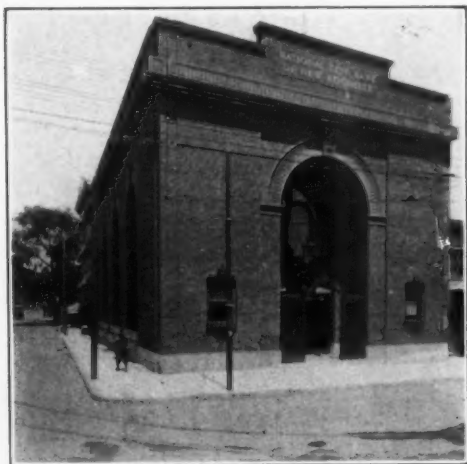


Fig. 4. A Bit of the Beaux Arts—The National
City Bank.
New Rochelle, N. Y.

should hie for his week-end with glad relief. So indeed, it is a charming suburb, as suburbs go. But it might be so much more charming:—

every prospect pleases
And only man is vile

not even man in all his operations, as we shall presently see more at large. Only business man, and he is so only in some of his operations. In so far as the suburb is residential it is attractive. In so far as it is commercial, it is largely repulsive. Take this typical residence block, on the one hand (Fig. 1) which has been chosen for illustration, not because it is the most artistic or attractive of the residence blocks, but only as an average, and also, to tell

the truth, because the trees have not yet grown big enough to hide the houses, and the foliage and ampelopsis which, at the time of the picture taking, obscured even more attractive residence blocks did not obscure this. Then take this typical business block (Fig. 2) and note the absence of all the qualities which go to make the residence block attractive. Instead of comity, we have disputatiousness, instead of sociability, rampant individualism, in a word, the height of unneighborliness substituted for the state of brethren dwelling in unity. Imprimis, there is no skyline, but instead thereof a jagged sierra, and a high degree of inconsideration for the

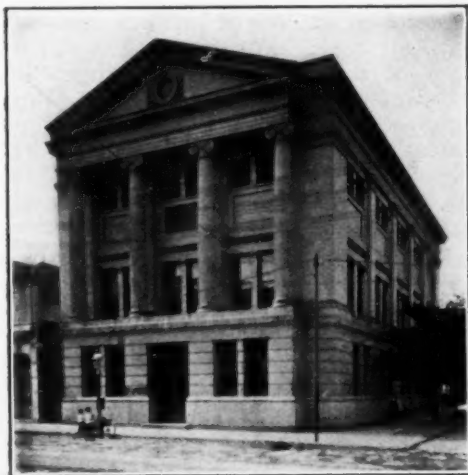


Fig. 6. The Masonic Temple.
New Rochelle, N. Y.
Geo. K. Thompson, Architect.

neighbors in material as well as in height, to say nothing about "style." First, buildings of four stories, now in brick, now in stone, secondly a Jacobean edifice in three stories in brick, succeeded by a ditto in Victorian Gothic, then a single story, then three stories in brick, then two in clapboards, then two in yellow brick, surmounting two in brownstone, and so forth. Open contempt for the neighbors is what they all exhibit, and shed new light on Ruskin's saying that "the chief object of commercial art is conspicuousness." To be conspicuous the easiest way is to be different, to build higher and bigger



Fig. 5. The Post Office.
New Rochelle, N. Y.
Franklin D. Pagan, Architect.

than your neighbor and possible competitor, and to emphasize your aloofness from him. Not, of course, that the builders of new shop fronts should conform to the humble clapboard edifices which they supplant, and which exist merely provisionally, as relics of an humble past. But that there must be some common height, which in a place of the actual size of New Rochelle, or its size in the near future, would commend or even impose itself, is a proposition which has failed to impose itself on the builders of the commercial part of the New Rochelle that we see. And yet it is a kind of primary precept of that social civilization to which the appearance of the commercial part of New Rochelle is a disgrace and a defiance. In some countries, for example, in France, this pri-



Fig. 7. St. Gabriel's School.
New Rochelle, N. Y.
J. C. Cady & Co., Architects.

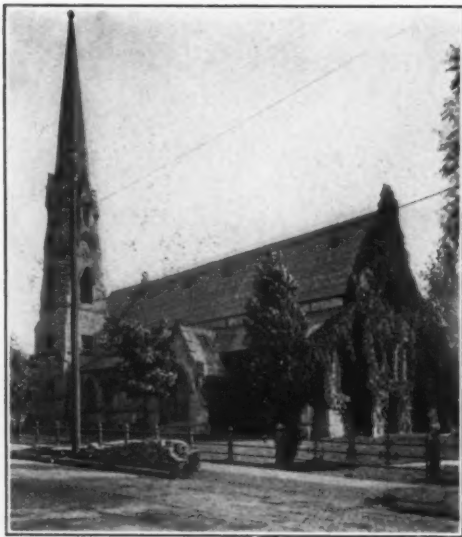


Fig. 8. Trinity Church.
New Rochelle, N. Y. R. M. Upjohn, Architect.

mary requirement of civilization would be officially imposed. In other countries, in which individualism is as rampant, in many ways, as it is in our own, the same result is attained by the feeling of neighborliness. A tradesman would be as much ashamed to annoy his neighbors by the overweening pretentiousness of his store as of his house. In this latter respect our tradesman seldom errs as he habitually does in the former. But he has a notion that his right to advertise takes precedence of social decency. This feeling is one of the most awful results of our commercialism.

It ascends to regions where you would not suspect its existence. It extends to what you may call "institutions." A village bank is, or clearly ought to be, a village institution. It has the right, and one may say the duty, of building for itself a modest and suitable home, which shall be exempt from the more vulgar manifestations of the dollar hunt. Surely a bank should have more dignity and self-respect in these matters than can be exacted of a hustling Yiddish storekeeper, for example. Wherefore the "new" building of the New Rochelle Trust Company is about the most depressing erection on the main street of New Rochelle (Fig. 3). For it happens

that this institution did possess a perfectly appropriate and even charming little banking house of its own, which was one of the chief attractions of the main street. It was originally built from the designs of the late Mr. F. C. Merry some sixteen years ago. Only a door and a big window, wide and two stories high, afterwards extended laterally, but not vertically. In its original state, or after the first administration, it did equal credit to the architect and owner. With its modest two stories in brownstone, its studied and effective fenestration, and its artistic carved work, even though wavering in "style" between Renaissance and Byzantine, it was a most grateful object, almost the beau ideal of a village bank, one would have said, before the erection of that sparkling little work of Mr. Sullivan's in distant Minnesota. But the bank officers were apparently the least appreciative of the New Rochellers of the value of their habitation. It is true that it may be a case of "the laurels of Miltiades." For the other and younger of the "local" financial institutions, the City Bank had just "come from" erecting a building for its own use which was bigger and more conspicuous than the brownstone



Fig. 9. Trinity Tower and Chancel.
R. M. Upjohn, Architect.

front of the elder, and which might be suspected of a disposition to domineer over the main street to its elder's detriment. But, really, there is no radical fault to be found with this latter edifice (Fig. 4). It is a monochrome of red brick, in the prevailing mode of the Beaux Arts, successfully simplified and owing its impressiveness to simplicity and "scale." It is part of the simplicity which makes the success that it evidently exists solely for the accommodation of the institution, its owner, and makes no provision whatever for "the pig that pays the rent." Moreover, its altitude does not exceed the three-story limit which is the normal cornice-line of a place of the size of New Rochelle. It is also, like the building which it may have overtopped and may have tended to efface, a dignified fulfillment of a respectable requirement. But, in fact, respectable as it is, it did not, to the judicious and sensitive observer, succeed in effacing or eclipsing the older two-story bank. On the contrary, to such an observer, the elder remained the better, in spite of the superior smartness and modishness of the newer. If such an observer had had no other means of judging the comparative solvency and magnitude of the institutions than the fronts they respectively put up, he would have



Fig. 10. Methodist Church.
New Rochelle, N. Y.
Weary & Kramer, Architects.



Fig. 11. St. Gabriel's Church.
New Rochelle, N. Y.
William Schickel, Architect.

been quite as apt to put his money in the two-story brownstone edifice as in the colossal single story of the red brick repository. In either case it was manifest that the institution was enough of an institution to build quarters for itself and to occupy them exclusively. But, in an evil hour, the Trust Company was inspired to proclaim that it could no longer afford this isolation, and to build two additional stories, which is to say, as superfluous and irrelevant to the banking business as to the architecture, obviously to reduce expenses by making them pay rental. Add that the additional stories necessitated the destruction of the cornice of the original building, which was an integral part of its architecture, that they themselves do not conform to the substructure even in material, and that they have not in themselves the slightest architectural interest, and you come near spelling vandalism. In truth, the superstructure so suggests a cornice of sheet metal that you have to go about to the side to assure yourself that this iniquity at least has been foregone and that the cornice is, in fact, of honest brownstone, honestly bonded into the buff brick wall. The superstructure is, all the same, a depressing performance, the more depressing, paradoxically, the higher it goes.

The general aspect of the business quarter of New Rochelle, like the general aspect of any other suburban town, like the general aspect of the tenement house quarter of any great city, strongly suggests that this same sheet-metal cornice is the fount and origin of architectural vulgarity. It is by its nature a piece of cheap finery, and cheap finery is the very symptom of vulgarity. Imagine, in any of the suburbs or any of the tenement house quarters aforesaid, an effective prohibition against the erection of any sheet-metal cornices or projections whatever made to imitate masonry, and that the builder had to construct his cornice, such as it was, of honest brickwork or masonry. Can you imagine a more wholesome and beneficent regulation, from the architectural point of view, any other one restriction which would do as much to banish vulgarity from the street architecture and render it impossible? Try it, and you will be likely to give it up. Wherefore it is a pleasure to say that from this particular form of vulgarity and vandalization the business quarter of New Rochelle is comparatively free. Not absolutely, of course. That were much, too much, to hope. But, a good many years ago, it occurred to some architect, possibly only to some builder of sound and honest instincts, that the tin cornice was an ugly fraud and sham, and that he would make his cornices out of the ma-



Fig. 13. Methodist Church.
New Rochelle, N. Y.

W. H. W. Young, Architect.

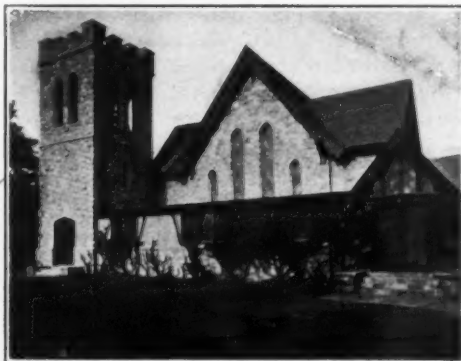


Fig. 12. Presbyterian Church, North Ave.
New Rochelle, N. Y.
Frank E. Wallis, Architect of Church.
Frank Rosh, Architect of Tower and Additions.

terial of his walls. He thus put it out of his power to be vulgar and repulsive beyond a certain point. And, in every one of the principal streets, you may see business buildings which have no other claim to admiration than this negative one that they do not flaunt a sheet-metal cornice, and which by that mere omission become at least comparatively respectable. The building in Huguenot Street, occupied as a post office, and, indeed, I believe, designed with a view to that occupancy, though not a government building, becomes, largely in virtue of this omission, almost exemplary (Fig. 5). It has other points in its favor, to be sure. While it seems to be amply lighted, the proportion of voids to solids is large enough to assure the eye and the mind of stability; the fenestration is throughout well managed, and the problem of a shop or show window which shall fulfill its commercial purpose without destroying the apparent stability of the walls is particularly well studied in outline and in detail. The architect was rather puzzled on being complimented on so simple, hum-drum and unpretentious a front. But, one was tempted to answer, that is "just it." A suburban commercial front which can justly be accused of unpretentiousness, even hum-drum and monotony, and of nothing worse, has vindicated itself. Imagine a whole village street lined with buildings like this for stores and offices, against the background of which the buildings



Fig. 14. "Tuscan Villa," 1851.
New Rochelle, N. Y.
Alexander J. Davis, Architect.

properly more costly and pretentious, the public buildings and such quasi-public buildings as the banks, might be effectively relieved and set off, and would you not rejoice in the sight and be grateful for it if of a sensitive and thankful constitution? Nay, compare it with the new building adjoining it, which is much more "the regular thing" in suburban commercial architecture. The author of this has at least had grace enough given to him to conform to the cornice-line of his neighbor, and, in general, to the division of its stories. For this relief, much thanks. But you cannot help seeing that his building is, in the first place, impossible. If it were what it purports to be, it could not stand up for an hour, the whole superstructure being without visible means of support. The absence of anything to be called design, either in composition or in detail, is complete; the contrast between the marble and the brickwork of a violence aggravated by the spottiness with which the latter is introduced against the former, and, to crown the edifice, there is a cornice of unmistakable sheet-metal, the pretentiousness of which is effectively exposed by the solid and unpretentious projection of the brick cornice next door. Yet, of course, the newer is more characteristic of the street architecture of the suburb than the elder. Can any civilized man hesitate as to which he would choose as the prevailing architecture of a village street?

New Rochelle is rather exceptionally fortunate, as has been said, in the preference which so many of its business buildings show for honest masonry over fraudulent sheet-metal as the material for cornices. It is also rather favored among suburbs in its public buildings. The contributions of the municipality itself to the decoration of the main street are not important, are, in fact, negligible. There is a fire-house on one of the side streets, in white stone and buff brick, which one might, if hard pressed, designate as French Gothic, and which has pretensions that might become performance if it were not so painfully thin and shallow. The "City Hall," at the center of the main street, meant to be the cynosure of neighboring eyes, is a crude and ridiculous edifice, which no human being could think of admiring. It must much antedate the municipality and belong to the "village," bearing, in fact, the marks of the untutored mechanic of the late sixties or early seventies. Nobody could think of admiring it, and yet one wonders whether it had not better stay where it is than to be superseded by the smart Beaux Arts edifice which would probably supersede it if the supercession were to take place just now. Untutored carpenter for irrelevant artist, it is a more congruous object than, for example, the City Hall of Paterson, N. J. True, the municipality would not be shut up to a choice



Fig. 15. "Tudor Villa."
New Rochelle, N. Y.
Alexander J. Davis, Architect



Fig. 16. Gothic Cottage, 1858—Now the Residence of Mr. Frederic Remington.
New Rochelle, N. Y.
Alexander J. Davis, Architect.

between these types. In fact, at one end of the main street there is a classic building, the Masonic Temple (Fig. 6), rather more familiar to New Rochellers as the Public Library, and at the other end a Gothic building, built and presented to the town as a gymnasium and intended by the generous donor as a general social center, which two offer a much more eligible choice of types. The latter quite missed its destination, owing to the impossibility of securing the social mixture of which the fond donor dreamed. What is it the village magnate says, in Mr. Howell's novel, of



Fig. 17. Pointed Villa.
(The front has been modernized.)
New Rochelle, N. Y.
Alexander J. Davis, Architect.

such a proposition? "I am perfectly willing to meet these people at the polls or the communion table or in any proper way; but a man's home is sacred." At any rate, the classes would not mix, and the building consecrated to their coalescence is now St. Gabriel's School (Fig. 7). But one cannot regret the delusion which at least produced the building, with its soft red monochrome of brick wall and tile roof, and its careful and studious adjustment. As little can one suggest regret at the "tetrastyle in antis" over a plain brick basement of the Masonic Temple. This is a piece of classic of the kind rather better handled by the mechanic of 1820 or thereabouts than by the contemporary "artist," in which, that is to say, the order is successfully incorporated with the structure, so as to seem a part of it, instead of being plainly exotic or irrelevant. This latter effect is produced by a schoolhouse out on North Avenue, which consists of a mere factory, with a Greek portico casually adjoined to it, which has plainly nothing whatever to do with it, and this latter effect is a much commoner product of the present "classical revival" than is the former. Of course, the classic building at one end of the main street is entirely incompatible with the Gothic building at the other. Which represents the more eligible type for a village suburb like New Rochelle is a question there is no use in arguing. As to this, one has to say—*De gustibus non disputandum*. But, in any case, one would have to be a bigoted partisan not to admit that the place is fortunate in having so well done an example of each of the two opposing styles. As to the other secular public buildings, they are schoolhouses, and none of them is of more architectural interest than the one we have mentioned. It is a pity, indeed, that so much money should be spent, no doubt to so much practical and educational, but to so little architectural effect.

As to the sacred public edifices, New Rochelle is rather exceptionally fortunate in its churches. Trinity alone, one of the best works of the younger Upjohn, if not his masterpiece, would lend distinction to any suburb fortunate

enough to rejoice in its possession (Fig. 8). The Gothic revival did no better piece of ecclesiastical work of its kind. Nothing could be more considerate or more successful than the disposition of the parts and their relation to one another and to the whole, than the adjustment, the design and the scale of the detail. The dwindling aspiration of the spire, the treatment of the transition from the square tower to the octagon, the design of the middle stage of belfry light and clock face and dormer, the relation of the whole mass to the polygonal and buttressed apse alongside (Fig. 9)—what could possibly be better? Add that the emphasis of structure is enhanced by the stress of color, the combination of material, a mellow yellowish gray rubble with wrought work of brownstone, being, in effect, that which Richardson afterwards employed with so much success. Add, also, that the church distinctly "belongs," and that it would be as much out of place in a much more urban or a much more rural parish, as it is delightfully in place in this suburb, and you have a beautiful and impeccable success. It is unpleasant to have to add that the custodians of the church have not shown themselves very appreciative of their treasure. And we shall also have to blame the memory of the same Mr. Merry who cast the original design for the New Rochelle Trust Company before the directors of that institution. For, when the parish house came to be added, it unfortunately happened that the Anglican Gothic had been superseded by the Richardsonian Romanesque, and a rather barnlike structure in that style was the result. It was the more a pity because what the addition should have been was so plainly indicated by what existed. An English Gothic parish house, and possibly a rectory thereto, of the same material and the same architecture as the church, with, by all means, a low but open arcade of covered cloister or ambulatory connecting it with the main edifice—one sees that that was imperative. If that had been provided, the "parochial plant" of Trinity would have rivalled that of St. John's, Yonkers, by all means



Fig. 18. An Average House.
New Rochelle, N. Y.
J. N. S. Quoi, Architect.

the most successful example of such a plant in Westchester County. Whereas, now not only do the church and the parish house dwell together in disunity, but the vested choir has to scuttle across the open from the robing rooms to the church—even under umbrellas in rainy weather—and dignity has to take care of itself. Too bad!

There are other churches worthy of note. The Methodist Church in Chester, serpentine and brownstone, confronts at the east end of Main Street the Salem Baptist Church, in white marble, with a red tile roof. To each may be applied the irrefragable criticism of the Vicar of Wakefield that the picture



Fig. 19. Built for Comfort.
New Rochelle, N. Y.
Franklin D. Pagan, Architect

would have been better if the painter had taken more pains. The latter has a good motive, the pyramiding and convergence in an "auditorium" church, of all the parts to the apex of the steep roof. But the spire, instead of emphasizing this effect, confuses and obscures it, and, as to detail, there cannot be said to be any at all. Of course, decorative or even expressive detail costs money. But one would very much rather see spaces and pieces left frankly blank for future enrichment than to see a provi-



Fig. 20. A Shell Porch.
New Rochelle, N. Y.
N. J. Burchell, Architect.

sional "finish" which looks as unfinished as blankness, and imparts to the design itself a "half-baked" aspect. On the other hand, the Methodist Church gains an undeniable success in its effect of color (Fig. 10). The Chester serpentine, albeit of a vivid and almost of a grass green, looks quiet in such large expanses, and its quietness is even enhanced by the brownstone of the wrought work. But the composition does not seem to have been studied at all in perspective, for the front, very good in itself, with its triple window, does not



Fig. 21. A Happy Afterthought.
New Rochelle, N. Y.
Franklin D. Pagan, Architect.

come together with the side, with its great wheel window. And, in fact, the side elevation has not been studied even by itself. No artist could possibly have drawn out this elevation and remained of the opinion that it was good, or even that it would do, with its two equal gables and its entire lack of any central point of interest. All the same, thanks to its success in color, and, in truth, to the success of the front in design, it is a very popular edifice. For that matter, either one of these churches is immensely preferable to an unfortunate Catholic church in Centre Avenue, called "Of the Blessed Sacrament." This is of white marble, carefully enough wrought,



Fig. 22. Homely Picturesqueness.
New Rochelle, N. Y.
Franklin D. Pagan, Architect.



Fig. 23. Dwelling Apart in Unity.
New Rochelle, N. Y.
Franklin D. Pagan, Architect.

and evidently has cost money. One wonders why it should, nevertheless, be so distressingly, so infuriatingly ugly, and is inclined to attribute the result not only to the painful thinness and shallowness throughout, but very particularly to the insensibility shown in the shape, arrangement and modeling, or, rather, no modeling of the openings in the tower. Common charity forbids the illustration of it. Another Catholic church, St. Gabriel's, is by no means so bad, though far indeed from exquisite (Fig. 11). It is very solid and rather massive, with its granite walls and its tiled roof. But it loses much of the effect its solidity and honesty would entitle it to by the lack of contrast. It has, one may say, no detail at all; but, as executed and finished, is merely a thing "roughed out." A little more money spent in stonecutting, under the



Fig. 25. A Glorified Farm House.
New Rochelle, N. Y.
N. C. Burchell, Architect.

direction of an architect who knew what he was about, in furnishing capitals for the rough pillars, let us say, dressed offsets for the rough buttresses, mouldings for the rough arches, would have far more than paid for itself in architectural effect, even assuming the actual rather awkward and uncouth composition. The Presbyterian church in North Avenue is immensely better (Fig. 12). One may criticise it as being rather too rural for its suburban place and surroundings, though it is not on the main street, and goes very well with the dwellings in its neighborhood, being, as one might say, a "cottage church,"



Fig. 24. Twilight in Rochelle Park.
New Rochelle, N. Y.

and owing a good deal to the half-timbered and plastered adjuncts to the rough masonry of the nave, with its heavy projecting bargeboards. But, a mile or more beyond this, and well out in the open country, there is a charming little Methodist chapel, a gem, in fact, of rural church architecture, of which the appreciation by its possessors may be judged by the fact that the pastor being inquired of in that behalf, though he quite knew the builder, could not say "who drew the plans." One's hearty congratulations, all the same, to the draughtsman of the plans. What could be more seemly and fitting than the little edifice, with its basement of rough stone

and its superstructure of shingles, left to weather into harmony with the stonework, with its well-studied relation of gable and porch and steeple and apsidal transept; above all, with the perfect congruity of the whole with its surroundings? Next to Trinity, than which it is so much less costly and pretentious, distinctly the best piece of church architecture in New Rochelle (Fig. 13).

But, of course, the most interesting of the buildings of any suburb are its dwellings. It is in domestic work that contemporary American architecture chiefly shines, especially in rural and suburban domestic work, and in houses of modest pretensions and moderate cost. "The House Dignified," as it has lately been described, meaning largely the "House Regardless of Expense," is apt to leave the picturesque tourist rather cold. It has been said that the American people, and it might be said that all modern peoples, build their houses in the vernacular and their public buildings in an unknown tongue; which is perhaps only another way of saying that architecture is a dead art; whereas, housebuilding will continue to be practiced as long as men need habitations. In the great majority of cases, it will, of course, be, in the Baconian phrase, of houses built "to live in and not to look on," and, in this country, in particular, of houses within the pecuniary reach of the average man, not beyond the reach of any reasonably industrious and ordinarily competent citizen. When one of these houses is pleasing "to look on," without ignoring any of the conditions on which it is based, it is especially welcome as a social not less than as an architectural exhibit. And the enormous improvement within a generation of the housing of the average man, artistically as well as practically, the escape from vulgarity and pretension and the attainment of a homely and homelike picturesqueness, is a piece of national progress on which we are entitled to congratulate ourselves almost unreservedly. So, although New Rochelle has quite its share of "swell places," it seems best, in a study of this kind, to ignore them and confine our-

selves to such of the houses of moderate size and cost which show some touch of art.

But first one has to congratulate this suburb upon a group of comparatively early dwellings, touching or even surpassing their half-century of duration, such as few suburbs can show. Colonel Richard Lathers was the public benefactor to whom New Rochelle is indebted for these things. As his published "Reminiscences," relate, it was in 1848, after a brief but successful business career in New York, that, attracted by the accessibility and the natural and historical interest of New Rochelle, he bought a farm on what is now known as "Lather's Hill." And it was only three years afterwards, in 1851, namely, that he employed an architect to design him a more seemly and dignified abode than the old farmhouse which he had occupied thus far. This is the "Tuscan Villa," which still stands and constitutes an attractive object to all pilgrims to that quarter of the suburb (Fig. 14). He was lucky in his architect, Alexander J. Davis, memorable to the younger generation as the author of the old University Building in Washington Square, the "Chrysalis College" of Theodore Winthrop's "Cecil Dreeme," which stood to ornament the east side of the Square until it was pulled down, some fifteen years ago, to make room for a modern tall building, memorable for other preceding and subsequent works, and affectionately remembered by architects of the generation next following his own as "Papa Davis." Mr. Davis had, some fifteen years before, written a book, or, rather, "issued a work," for the volume consisted almost exclusively of plates, to commend Gothic as the suitable style for country houses. The only copy I ever saw of it is in the Yale Library. And all New Rochellers have reason to be thankful that it was put into the heart of Colonel Lathers to employ its author during the closing years of the fifties to design certain "investment houses" on Lather's Hill. These are four in number, three of them designed in 1858, and all, in 1909, still eligible residences, particularly well planned for spaciousness

and dignity of interior effect, considering their not extravagant dimensions, the "Tudor Villa" (Fig. 15), two Gothic cottages (Fig. 16), still extant and intact. In 1859 followed the "Pointed Villa" (Fig. 17), which has since, in the course of modernization, been considerably shorn of its fair proportions and bereaved of its decorative bargeboards, and had a porte cochère added to it. But, all the same, what examples they all were, and, for that matter, are to the untutored builder! How much they have restrained his excesses who can tell? They do form a benefaction to their neighborhood.

For, in truth, the average building of New Rochelle is not marked by vulgarity and pretension (if the repetition be not tautological), any more than they are by artistry. The average house of New Rochelle is not distinctly attractive. But, then, no more is it distinctly repulsive, and that is again something to be thankful for (Fig. 18). The average building is not of single dwellings, but of rows. When houses come, they come not single spies, but in battalions. That is one of the conditions of suburban "realty development." The developer acquires a tract of farmland or an old "estate." Then he proceeds to "pave, gutter and curb." Then he puts two large gateposts, formerly of stone, now more likely of the cheaper concrete, at each end of his holding in token of something or other, which he might call privacy or exclusiveness. This he occasionally accentuates by wooden paling and swing-gate between his posts. Then he sits down at the receipt of "offers" from homeseekers. It is the familiar suburban experience, but it seems that the proportion of gatepost at the end of the "Park," "Place," or what not, is especially large in New Rochelle. You need only go to one end of any of these reservations which is built up and populated and look at the baby-wagons and listen to the squalling to dismiss as idle the fears of "race suicide" in New Rochelle:

*Continuo auditas voces, vagitus et ingens
Infantumque animae flentes in limine primo*

You would not expect to find many architectural gems in these rows of reser-

vations of building lots, 50x100. Perhaps, with these dimensions and conditions, the most attractive of the spaces are those in which individuality is waived and conformity attained, in which, in fact, the developer seeks a building profit as well as a land profit, and employs one architect to do the whole, as was the case with our illustration of a typical residence block (Fig. 1). It is apt to be outside the "parks" and "terraces" or inside such of them as afford rather more amplitude of dimensions, and where some irregularity of terrain invites some individuality of treatment that the little "places" are apt to be most interesting. Sometimes it is only a straightforward aspiration for comfort, as in Fig. 19. Sometimes a single feature as the shell porch in Fig. 20, or, on a rather larger scale, the loggia which some owner has had the happy thought of adjoining to one of those houses, with two extremely acute gables which so abound as to be characterizing, and has had the luck to fall in with the right architect to execute for him (Fig. 21). Sometimes it is what may be the mere unexpectedness of a bit of homely picturesqueness in a commonplace street (Fig. 22). Sometime a quaint and tocklesome conceit, like those trim cottages, which so irresistibly and whimsically suggest that they must be inhabited Dickensiansly, by two old maiden sisters or two old bachelor brothers, who find that they can live neither together nor apart, but who have so clearly found their notion artistically carried out for them (Fig. 23). Sometimes one may suspect a merely factitious effect of twilight and shrubbery upon a design which, strictly speaking, is not much (Fig. 24). But, on the other hand, there is no question that it is to the force of design that a dwelling like this glorified farmhouse (Fig. 25) owes its effectiveness, even though one may quarrel with the combination of brickwork and stonework, and the unbased pretence of rusticity in the treatment of the chimney, or may practically wonder what happens when the snow lodges at the bases of those dormers, scooped out of the roof and without "eyebrows,"

which he yet finds artistically so attractive. Still less question when he comes, at the corner of a suburban street, upon so prettily and effectively pyramidized a composition as that shown in Fig. 26, where everything so evidently "belongs," and the aggregation of congruities attains such a charming unity that he has to recognize the work of an artist, and to pity, not without some shade of contempt, the wayfarer who recognizes nothing in it beyond what is to be found in its neighbors. Done in slight materials and at moderate cost, as this house is, there is no manner of question about its being a work of architecture.

A study of almost any suburb leads to the conclusion that there is more in it that is worth seeing than the casual observer would imagine. It is submitted that the illustrations show this to be eminently the case with New Rochelle. But, to recur to our starting-point, why should not more intelligent pains be taken, on the part of those whose interest it particularly is to take them, to impress the casual observer, the stranger on his first visit, with the advantages for residence or resort which he finds only after some sojourn? Why should not the best artistic intelligence of the place be exerted to put some constraint upon the builders of the business quarter, so that they should not initially repel the visitor whom the residence quarters are subsequently to attract. This is eminently a "business question." It is also a question of practical "civics." Corpo-

rate New Rochelle, for example, does injustice to the individuals who compose the corporation. Why should the chief avenue to the town, the direct road from the station to the business center, be also the Ghetto? It is too absurd, about the only parallel to it being the arrangement in San Francisco, before the earthquake and fire, whereby every visitor to the swell residential quarter had to climb through the noisome "Chinatown" to get there. And why should not the traction companies be constrained to add to the attractiveness and convenience of the municipality from which they receive their license to do business? It is rather hard to call upon the receiver into whose hands a traction company has fallen, by reason of its trustfulness that the public would not abuse its facilities of transit and transfer, to go about to make large expenditures. But, when it comes to four different "routes" being shut up to a single track, so that any delay at any point clogs movement by all four, it seems that the municipality might find means to enforce "a more central way." And when the main ganglion of the whole system, the central point of distribution and transfer, is up a side street, where passengers are simply dumped out, regardless of weather, to find their respective conveyances, then, clearly, "something is rotten in the state" of the community which permits such things to be. There is ample room and verge enough in New Rochelle for "municipal reform" of things that "come home to men's business and bosoms."



Fig. 26. A Work of Architecture.
New Rochelle, N. Y.
N. C. Burchell, Architect.

A Contemporary Westover

The Residence of Mr. Geo. T. Palmer, New London, Conn.

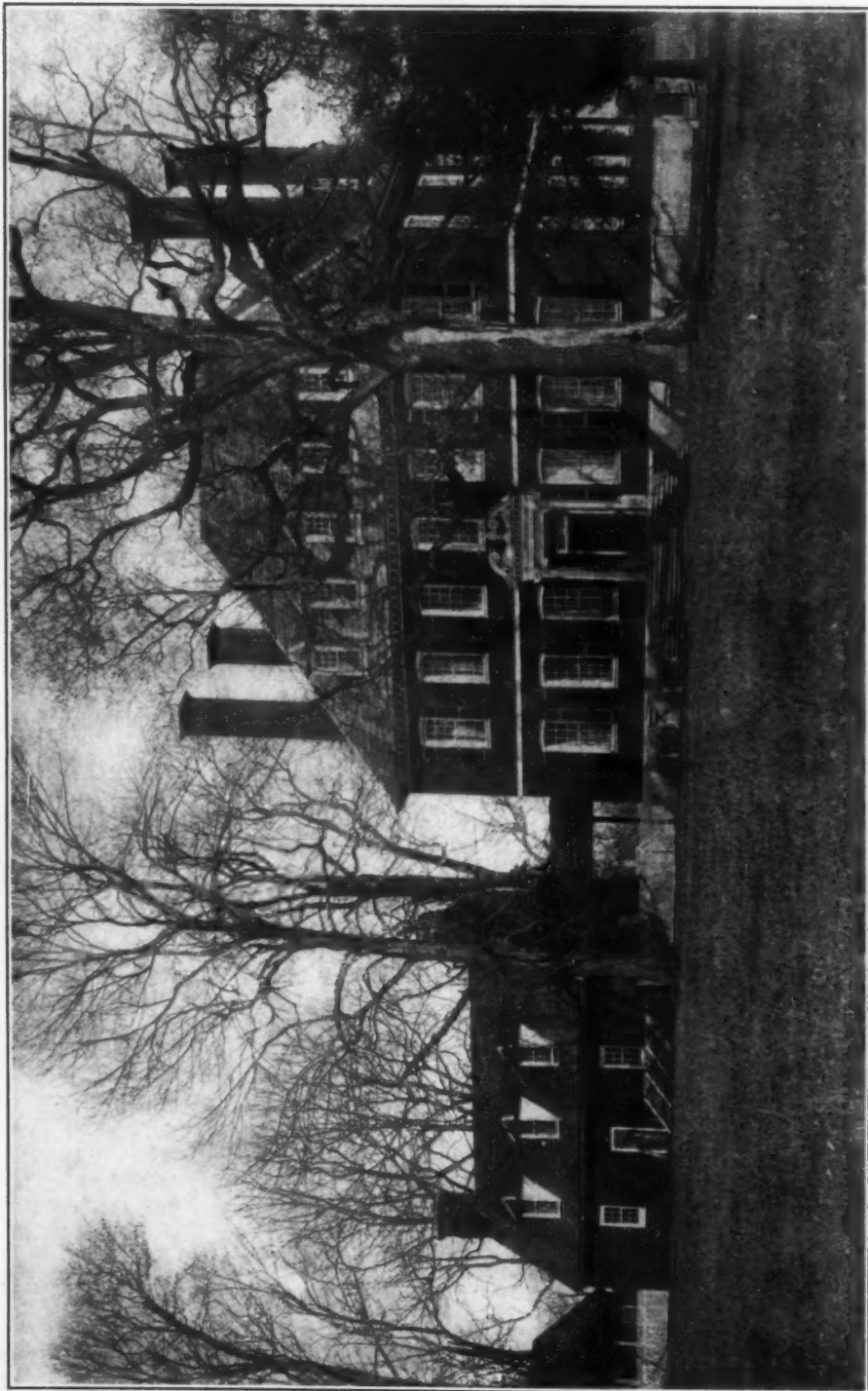
(Photos by Floyd E. Baker)

It is always clarifying, in considering the architectural value of a contemporary adaptation of an historical style, to be able to refer the house to some particular model; and in the case of Mr. Palmer's house, illustrated herewith, there can be no doubt either of the identity of the model or of the frankness of the debt. The owner of the house, who has a peculiar personal interest in Colonial architecture and furniture, specifically commissioned his architect, Mr. Charles A. Platt, to build a residence for him with "Westover" as the basis of the design. Mr. Platt followed his instructions loyally. "Westover" is one of the half-dozen Colonial houses distinguished by certain marked characteristics from its brothers (or shall we say its sisters?) in colonialism. Nobody in the least familiar with both houses could fail to recognize the model on which the modern house was based. Not only has the general mass of the Colonial model been accepted, but there is much similarity even in the detail. It should be remarked, however, in the same breath, that although the imitation is frank and faithful, it is very far from being mechanical and slavish. Certain modifications have been introduced into the modern "Westover," which, without making it any less specifically Colonial, give it the appearance and the character of a thoroughly contemporaneous house. Some of these modifications are evidently the result of the domestic needs of a contemporary American family. Others have been introduced by the architect with the evident intention of improving somewhat upon the original design. But these occasional variations in detail do not in the least violate either the spirit or the effect of the model. The modern "Westover" is as far removed from personal self-assertion on the part of the architect as it is upon mere archaism. Mr. Palmer's "Westover" is as frankly a house of a contemporary American gentleman as it is frankly an adaptation of a well-

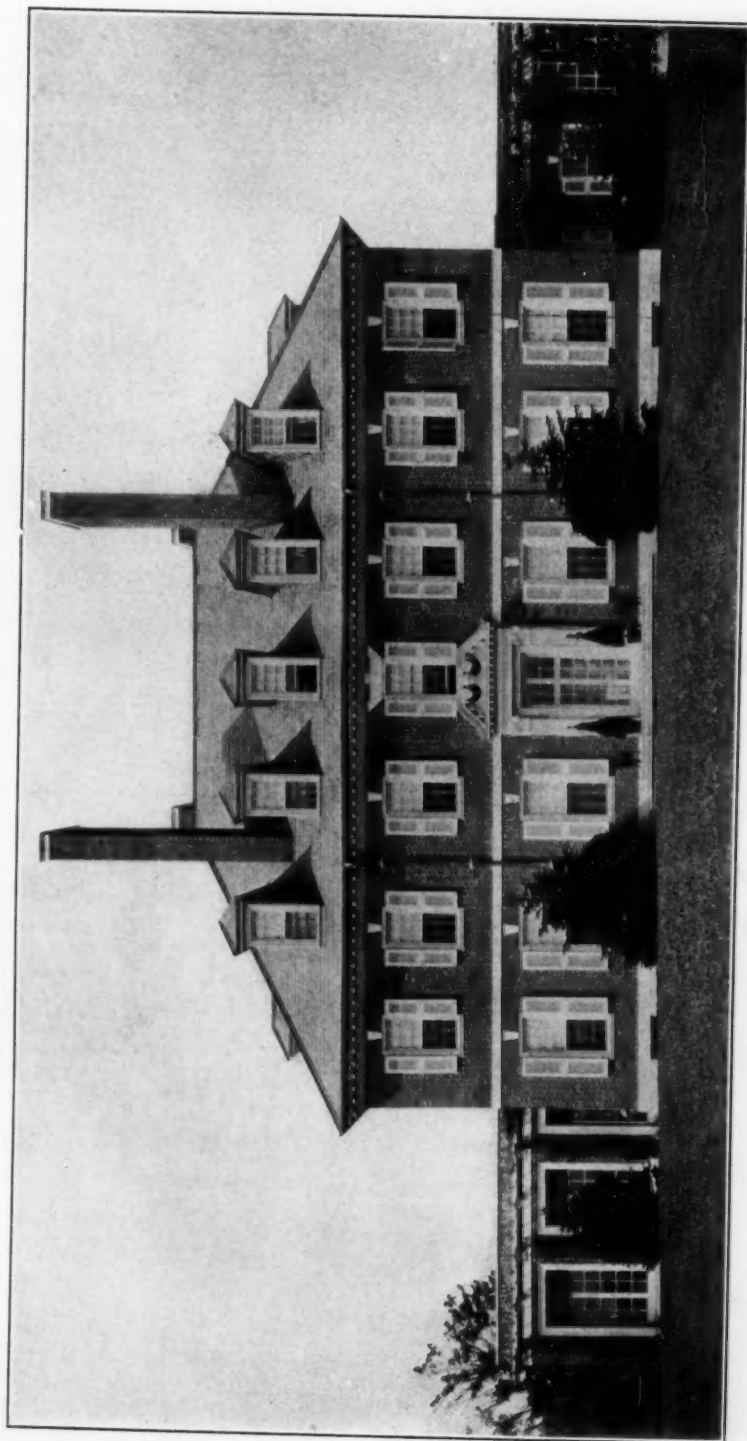
known historical residence, and its value, both as a type and as a lesson, is due partly to the candid and competent intelligence with which the architect has not been afraid either of acknowledging his debt, or of making the borrowed capital pay a higher interest than the original loan.

The plot on which Mr. Palmer's house is situated consists of a long, narrow strip of land, bounded on the two ends by avenues. At one end it affords a view of the open water, and as this view was very interesting and attractive, its existence was of dominant importance in the location of the house. The building was placed near the end of the plot, in a situation overlooking the water view. The land falls away from the site of the house to the end of the plot, so that with the assistance of a certain amount of foliage and planting, the street is for the most part concealed from the vision of the inhabitants of the house. The proximity of the street and the presence of the view made it necessary to keep both the garden and the entrance away from this side of the dwelling. The intervening space between the building and the street is devoid of architectural treatment. It remains a plain lawn, planted with shrubs and trees, and with nothing in the nature of a porch except a simple platform, similar in character to that of "Westover" itself, but larger in size. It may be added that such a treatment was dictated not merely by the nature of the site and the direction of the view, but by fidelity to the architectural model. A modern "Westover" with a terrace would have been altered, not beyond recognition, but beyond any decently familiar relation with its original.

The entrance, not being situated on the water side of the house, has to be situated on the other side; and the same is true of the garden. The necessity of putting the public entrance and the private garden both on the same side was



THE ORIGINAL "WESTOVER."



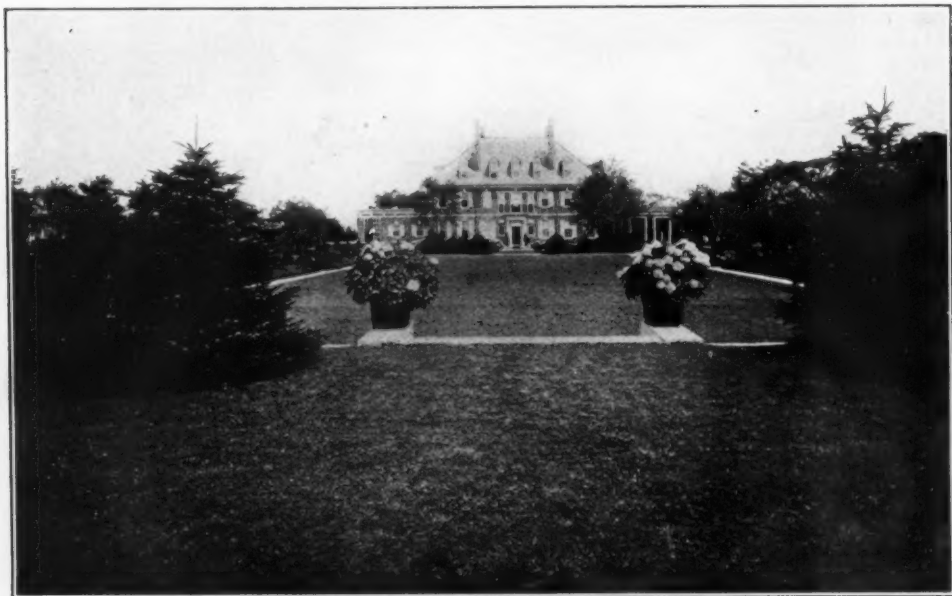
RESIDENCE OF MR. GEORGE T. PALMER—GARDEN FRONT.

New London, Conn.

Charles A. Platt, Architect.

attended with certain inconveniences; but they have been clearly neutralized by the details of the arrangement. The entrance drive sticks closely to the north-

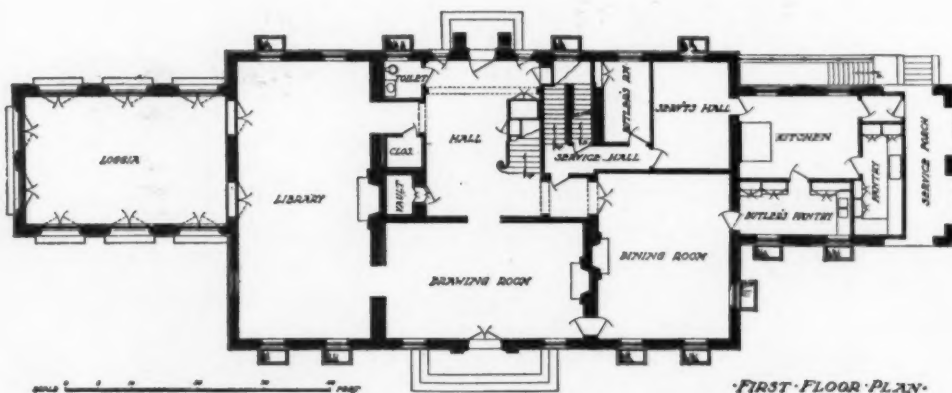
lead from it—one for service purposes, which goes directly to the kitchen, situated in the north wing, and one which goes into a round court immediately in



RESIDENCE OF MR. GEORGE T. PALMER—VIEW FROM GARDEN.

New London, Conn.

Charles A. Platt, Architect.



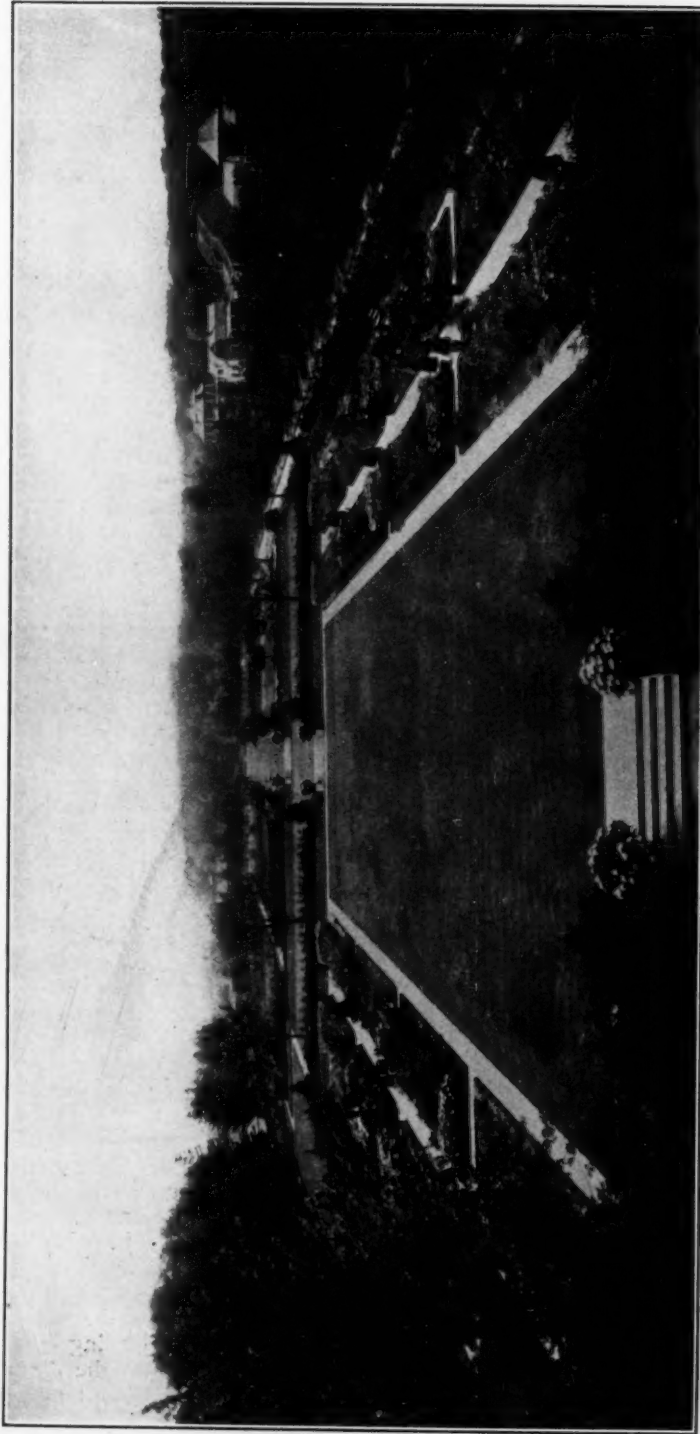
RESIDENCE OF MR. GEORGE T. PALMER—FIRST FLOOR PLAN.

New London, Conn.

Charles A. Platt, Architect.

ern boundary of the property, and as long as it runs close to the garden it is screened therefrom by dense planting. As it reaches the house, two entrances

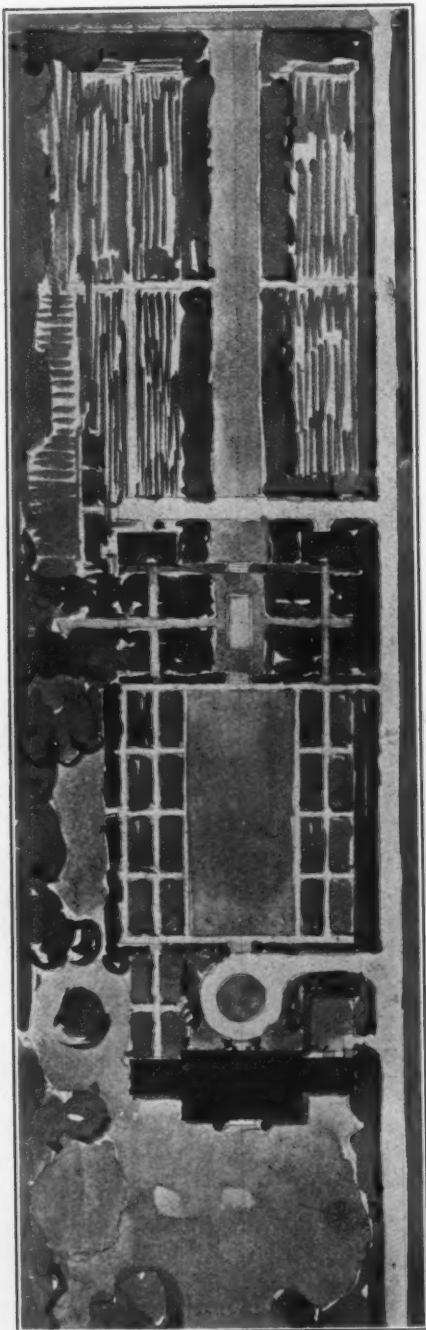
front of the house. The proximity of the garden on this side makes it essential that the entrance court should be inconspicuously treated, and should be



RESIDENCE OF MR. GEORGE T. PALMER—GARDEN.

New London, Conn.

Charles A. Platt, Architect.



Residence of Mr. George T. Palmer—Layout of
the Grounds.
New London, Conn.

Charles A. Platt, Architect.

devoid of architectural emphasis. As one looks at the house from the wall in the midst of the garden, the court is scarcely distinguishable; and the garden is planned so that the inhabitants of the house can reach it without interference. The whole center of the garden is occupied by a spacious mall, the axis of which coincides with that of the house, and this mall affords the open vista from which a house after the manner of "Westover" ought to be seen. The flower-beds are situated on the two sides of the mall. The inhabitants of the house can, consequently, reach the garden from the enclosed porch on the south side without crossing the entrance court; and in this way they are effectively protected against intruders. The garden itself is on a higher level than the court, and is separated from it by an evergreen screen. Once in the garden, the inhabitants of the house are able to wander where they please without any more than the usual fear of molestation.

It will be remarked that the plan of the house fits in with that of the lay-out of the grounds remarkably well, and that at the same time it is wholly unlike the plan of the typical Colonial house. A visitor enters into a spacious hall occupying the center of the ground floor. The hall is, however, nothing but a hall, and contains the usual closets and a stairway leading to the second floor. The architectural detail of this room deserves careful attention, for it is entirely Colonial or Georgian in effect, without any of the affectations which were not infrequently characteristic even of good Colonial interiors. On the right, as the visitor enters, is the library, situated almost full south and connected with an enclosed loggia, which in winter gets all the sunshine there is, and in summer serves admirably the purpose of a piazza. It is this loggia which provides the most convenient entrance to the garden. To the left of the hall is the kitchen and offices, while immediately in front is the drawing-room, which affords access to the platform on the side of the water view. A door leading from the hall also gives entrance to the dining-room, situated in the northeast end of the house. The kitchen is, of course, housed in an

extension, which balances, in the composition of the whole design, the loggia on the south side of the house.

Such being the lay-out and the plan of the contemporary "Westover," it will be interesting to trace with some care just where the appearance of the modern building agrees and disagrees with that of its Colonial ancestor. Compare, for instance, the eastern façade of Mr. Palmer's house with the photograph of the prototype reproduced herewith. One remarks in the two buildings the same white base, the same platform surmounted by the same treatment of the entrance door, the same division of the first from the second floor by a white band of stone, precisely the

One of the most noticeable of the differences consists, of course, in the character of the brickwork. The brick of the original "Westover" has gradually attained a solid dark surface. It looks as if its exterior walls had been painted red and that the paint had worn off in certain places, the joints in the brickwork showing only where the paint is disappearing. The modern "Westover," with its sharply penciled joints and its different color and surface, presents in this respect a very different appearance—which is due partly to its newness, partly to the different quality of the brick, and partly to different methods of laying. Another fundamental variation consists in the proportion of the façade.



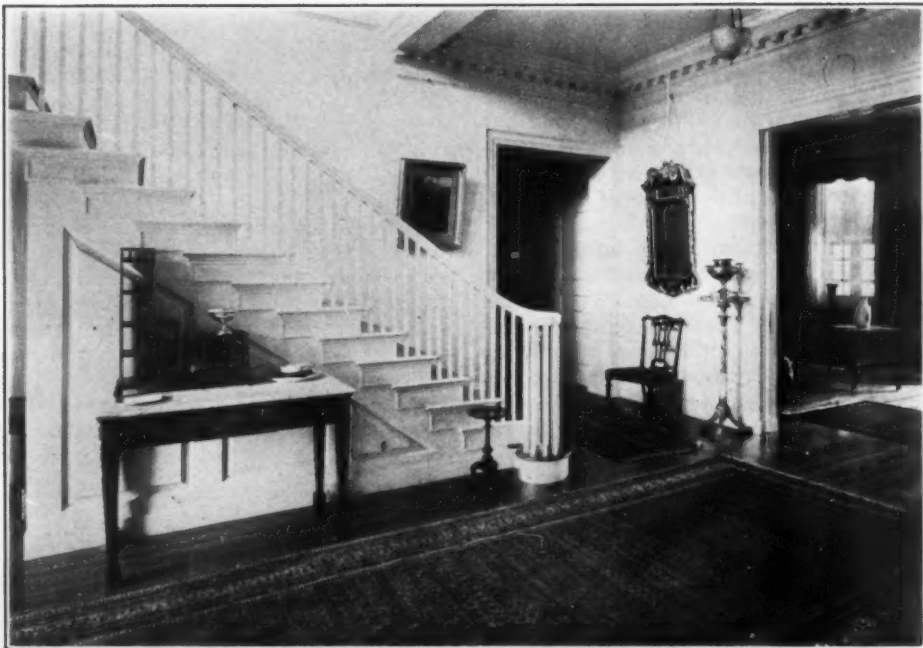
RESIDENCE OF MR. GEORGE T. PALMER—VIEW FROM GARDEN.

New London, Conn.

Charles A. Platt, Architect.

same number of windows on all three floors, the same number of chimneys, the same dominating and high-pitched roof; and a cornice with much the same details and projection. The result of all these similarities is that anybody who particularly admired and liked the general appearance of the older building could not well avoid admiring and liking its modern offspring. On the other hand, it does not take any very close inspection to detect between the two buildings a great many differences, both in proportion and detail; and these differences are in the aggregate so important that they deserve careful enumeration.

The modern building is longer than the old building in proportion to its height, and, consequently, rises less abruptly from its site. The white stone base is decidedly lower than the painted brick base of its ancestor, the windows are situated farther apart, the white stone band is wider, and the roof is not so high. All these changes tend to emphasize the horizontal dimensions of the modern "Westover" and make it fit more snugly to its site. Quite apart from the fact that changes of this kind were dictated by the increased floor area of Mr. Palmer's house, the relation of the wings of his dwelling to the main structure,



RESIDENCE OF MR. GEORGE T. PALMER—HALL.

New London, Conn.

Charles A. Platt, Architect.



RESIDENCE OF MR. GEORGE T. PALMER—DINING ROOM.

New London, Conn.

Charles A. Platt, Architect.

compared to a similar relation in the older structure, dictated some such rearrangement. In "Westover" itself, the one wing is detached and connected with the house by an open porch, which spreads out the two buildings as a group over a much longer line. But there was no room for such a disposition of the wings of the modern house, and the arrangement would also have been incon-

ings break the line of their respective roofs. This change was obviously necessitated by the plan; but it has, if anything, rather improved than injured the design. Again, in the "Westover," the upper line of the windows, and the sustaining brickwork above, was slightly rounded; whereas, in the modern building they are straight, and are surmounted by a white keystone, which supplies an



RESIDENCE OF MR. GEORGE T. PALMER—LOGGIA.

New London, Conn.

Charles A. Platt, Architect.

venient. These wings being what they necessarily were, the main building had to be lower in proportion to its height, quite apart from the fact that these proportions and the continuous line of the white string courses with the top of the additions tie the different parts of the building more tightly together.

A number of alterations in detail must also be remarked. The most conspicuous of these is the different places in which the tall chimneys of the two build-

ings break the line of their respective roofs. Finally, it will be noticed that although the projections of the cornices of the two buildings are practically the same, the details of the cornice of the modern "Westover" are decidedly stronger and more emphatic; and there can be no doubt that the scale of this newer detail is better than that of the original "Westover."

The interesting question in respect to the changes made by Mr. Platt in

adapting the old design to its modern uses is not whether he has improved upon his model, but whether he has succeeded in designing a convenient and a beautiful contemporary residence, which at the same time really embodies the essential spirit and effect of his original; and from this point of view there can be no doubt about Mr. Platt's success. The contemporary "Westover" can be proud of his ancestry. The real "Westover" is renewed in its offspring. If it is advisable to attempt the adaptation of the design of some particular time-honored building to modern needs, Mr. Platt has given an excellent illustration of the best way of doing it. He has imparted to the new "Westover" some of the individual charm and distinction which is more than ever becoming the characteristic of his work, while at the same time proclaiming in the most definite way the source of his design. Imitation of this kind is more edifying and fruitful than the most strenuous flight of intentional originality.

It looks like a very easy matter to study some authentic historical building and then to adapt it to a particular location and to a particular group of contemporary conditions; and much architectural criticism tacitly assumes that the designer of such a house lacks ingenuity to conceive and the patient skill to work up a design of his own, which will constitute a unique expression both of his own personal power and of the conditions of that particular problem. No doubt in many instances this assumption is justified. No doubt many architects who rely for their models on special examples of an authentic historic style are prompted to do so by laziness, economy, or sheer lack of imagination. But it is equally true that an architect who is doing his best to give a local and contemporary expression to such a house as "Westover," as compared to an architect who has no particular model before him, has merely increased and emphasized the difficulties of his task. He is in the same position as the poet who has adopted as the best temporary vehicle for his vision an

elaborate and complicated form like the sonnet instead of some simpler lyric form. In order to make his building successful, he is obliged to make his design conform to a much more elaborate group of antecedent conditions. He is obliged to make it, not merely the embodiment of a special architectural problem, but one which, in embodying a special set of conditions, does not do violence to an authentic original, embodying another group of conditions. Any single modification of the model, such, in the present instance, as the altered value of the wings in the whole composition, brings with it modifications in the whole design; and to make these modifications without proving false to the essential effect and spirit of the model requires not merely laborious ingenuity, but an historically disciplined imagination of a high order. The architect must know what changes he can and cannot make without losing the distinctive beauty of his model. He must have made himself the master of the original design, and have repeated in his own mind, with complete understanding, the architectural language and ideas of his predecessor. Anyone who believes that this is an easy task has only to make the attempt in order to receive his instruction. It is, as I have said, more arduous and exacting than the task of designing a building, for which there is no specific precedent. But the task is worth accomplishing just because it is so arduous and exacting. It is by such imitation that beautiful architectural forms and architectural styles are really renewed and perpetuated. What American architecture needs is not less of it, but more of it—more that is of the right kind. An architecture can never be consummate without style; and architects can never create style either by the force of personal imagination or by a merely realistic treatment of particular problems. They can create it only by the personal mastery of a fully formed style appropriate for their purpose, and its modification in the spirit of the original to suit their immediate needs.

Recent English Domestic Architecture*

If there is one fundamental difference which is especially to be remarked between the contemporary architecture of England and the United States, it is a lack of rational development in the former. That the contemporary English country and suburban house do not display the variety to be found in establishments of similar purpose in this country is not to be wondered at or even expected, for our requirements and general conditions are so much broader and more far-reaching. American climatic conditions alone are so varied as to create an endless variety of problems for the architect not to be found in any other country. Couple with the range of climate our great choice of materials and the vast extent of our territory, and the sum is the strongest array of causes imaginable to bring forth the utmost variety and interest in an architecture for so cosmopolitan a people as the American nation.

When an architect may be called upon to design, in the same year, for instance, a hunting lodge in the Maine woods, a Fifth Avenue residence in New York, an estate in the suburbs of Philadelphia, besides a country house on the prairies of the Middle West, and a Californian bungalow at the foothills of the Rockies, it can readily be appreciated that the work of such a man, even though it be entirely in the field of domestic architecture, may be the result of a vast amount of study under the most varying conditions. He can approach his task with little provincial prejudice, for life is too short to acquire so many and such diverse prejudices; nor, on the other hand, is he hampered by generations of tradition, which does not yet exist among us. He is forced, therefore, to meet his problems strictly according to the conditions which obtain in them, solve them according to his capacity as a student

and render them according to his talents as an artist. All this he is required to do in a space of time which would stagger a designer pursuing the less rapid and more conservative European methods which are so largely based on tradition and precedent.

The work which results from the feverish American method of design, consequently, presents, besides its inherent variety, a healthy state of growth, a development which one fails to find in Europe and especially in England. This development is, of course, entirely independent of the quality of the performance which must ultimately depend on the capabilities of the designer. It must not, for a moment, be understood that a claim of superior excellence is maintained for the average American domestic work as against the English. No American architect would pretend to deny that the average quality of English domestic work is far superior to our own, as the training and experience of the average practitioner in England are superior to those of the American. An impartial judgment of the best English and American domestic work cannot, however, fail to result favorably for us, as our cousins would, without doubt, be perfectly willing to admit. It is in our domestic work, and more particularly our suburban and country houses that the development of our architecture is most noticeable. The chief reason for this is probably to be found in the fact that in problems of this sort the American architect enjoys not only the greatest natural freedom, but his relation to his clients is a more independent one than when he is working for more mercenary interests.

The greatest drawback which confronts the American architect has been and still is, to a large extent, his want of professional standing with his clients. In proportion as we possess, as a nation, little general traditional culture, so also

*The Architectural Review (London), special issue, 1908.

do we suffer from an astounding lack of architectural appreciation. The culture which Americans of means have obtained is still so largely the result of desultory methods, based largely upon a perverted and bewildering taste and aimless foreign travel. It is not to be understood that foreign travel is in itself aimless, but the benefits which the great majority of American travelers obtain from their undirected attempts to acquire knowledge and understanding of art and architecture in traveling are in the main negative, so far as substantial culture is concerned. Whatever knowledge of architecture is thus acquired often operates for the architect rather as a handicap than otherwise. Instead of being free to approach his task with an unfettered hand, he is put to the necessity of overcoming opinions on matters which, if they could be analyzed, can really have little or no meaning for the people who entertain them. In proportion, therefore, as the architect is able to impose his own opinions and standards upon his client, to the solution of the latter's legitimate requirements will his efforts be crowned with success. A client has, of course, legitimate requirements and desires, but if he dabbles too much in what lies strictly in the province of the architect, and refuses to give way before the architect's superior knowledge, both the design and the client's satisfaction with it must necessarily suffer. It requires not only a capable designer to produce a good design, but a good client as well. Very often it is to be observed that a merely passably good designer is able to produce an extraordinarily good design because of the proper assistance of his client; whereas, a more capable designer fails utterly because of the handicap of a stubborn client. One of the most difficult lessons that a client has to learn is that there are some things in the designing of his house that he had better leave to his architect.

The English architect, on the other hand, enjoys an enviable professional position towards the public and his clients. As in France, his advice is as eagerly sought in matters of artistic and

æsthetic moment as is that of the engineer in matters of strength and stability. He, therefore, starts his task with public opinion in his favor instead of against him, as in the United States. If he has any prejudices to overcome they are more often his own than those of his client's. And to an American it would appear that he has prejudices which tend materially to interfere with his architectural progress. His natural tendencies are, of course, towards conservatism, robbing his work of much of that freshness of conception which characterizes the better class of American work, though that same conservative tendency prevents him from perpetrating some of the anomalies to be found in such large numbers among our own work. While the Englishman is content to be a careful and intelligent follower of approved things and methods in all branches of mental activity, not excepting architecture, the American wants more and more to be a leader. It is that American striving after leadership which in our architecture has chiefly taken the form of a bizarreness, popularly come to be known as originality, but which is in the overwhelming majority of cases nothing more than a venting of the untutored mind.

The occasion for these remarks is a collection of recent English houses published in a special issue of the *Architectural Review* (London). It is unavoidable that prejudice should creep into a review of English planning and designing, as viewed by a foreigner who is not in position to appreciate accurately the conditions under which the work has been done, or, in many cases, the reasons for certain elements in its composition with which he has had no intimate connection. The native will always make due allowances for and pity the shortcomings of the alien critic, who cannot be expected to know better; but while he is thus compassionate, if he be open-minded he may, perchance, distinguish here and there glimpses of logic suggesting to him the reasonableness of the viewpoint, even though it be different from his own. And if there is

one thing which conduces more than another to architectural interest and rational development, it is variety in the point of view. The variation of planning and designing, due merely to the different individualities of a number of competent designers pursuing very similar traditions, is not sufficient to develop a country's architecture.

On the contrary, it is the constant interchange of ideas between widely separated parts that produces progress in civilization, and art is no exception to the rule. There is, after all, not so much difference in the mental standards of different lands (since even those which are separated by oceans are to-day brought into the closest communication), as one is apt to imagine. It is this community of thought which one would expect to produce very similar tendencies in the art of building as in other fields of endeavor, modified, of course, by local conditions, but scarcely altered in its essential principles.

A lack of breadth in contemporary English architecture, and, most of all, in plan conception, is, therefore, rather in the nature of a surprise, though not as a controvertent of the theory of parallel mental development in different lands. In the plans of its domestic structures, one strangely fails to find any very marked departure from the type which was established in England with the early development of the modern home as we know it. The rambling country-house plan, without apparent regard for economy of material, maintenance or convenience, survives in England to-day with incredibly slight modifications. Whatever conveniences and modern devices have been introduced, and these are many, have, it seems, been introduced bodily into the antiquated type of plan without being, in any adequate measure, assimilated into the fabric of the design. From the American standpoint, the English plans, with their many small dependencies of service, are extremely impractical, and considering the condition of the servant question in America, quite impossible. Most notable, perhaps, among the peculiarities of English planning is, in the majority of

cases, the lack of easy communication between the kitchen and the dining-room. These two rooms, which the contemporary American architect tries so hard to bring into the closest connection consistent with comfort, one finds in the English houses, as often as not, not only far removed from each other, but separated by a long, tortuous passage. The numerous small compartments of the kitchen, such as larders, sculleries and cupboards, indicate the necessity of a larger number of servants than we would think it either economical or desirable to keep, for servants always increase the space which must be given over to recreation and sleeping quarters, thus affecting considerably the requisite cubical contents and the first cost of building, as well as the maintenance and convenience of the household.

In scanning the plans which are shown in the journal before us, our estimate of their worth is very apt to be too strongly influenced against them by an absence of that formality which we have so largely adopted from the modern French school of design. It should not be overlooked that of all structures in which formal planning should be permitted to play an important part, domestic work is the last, so that, while the picturesqueness and rambling nature of the English plans may seem to us very strange, we, in our design, are perhaps guilty of erring on the side of excessive formality and bareness. When we perceive that this very irregularity of the English plans in the building up of the designs is made the chief factor in producing their charm, our estimate of the whole performance takes on a more friendly spirit. In the manner of roofing their houses the English architects are especially apt, and one must often wonder whether, after all, the designer did not first design his general roof composition and then vary his plan to fit its picturesque contours. That a designer should regard his roofs as one of the important elements of his design is not at all an unreasonable attitude. For outside of the fenestration, what is more conspicuous in the appearance, or more potent to make or mar the effect

of a country house than its roofs, especially in those instances in which wall ornamentation is out of the question? Is not much of the excellence of our early attempts at cottage design, the so-called Queen Anne style, due largely to the skillful handling of the roofs?

Another feature in which these English designs especially excel is in their integral conception, with their sites and surroundings. Whether or not one likes a particular house, there is always the impression of its fitness with its environment. It seems to belong where it has been placed, and the work of the architect has not stopped with the porches, but has been allowed free play about gardens and grounds, producing that unity of effect which our architects are so seldom in the position to impose upon their clients, who too often prefer to do their own landscape architecture, prompted by the interested nurseryman and gardener. There is, perhaps, no important art in the making of coherent and rational country place which is oftener neglected or more unintelligibly performed than the careful designing of the grounds and roads about the house. Why an owner who is wise enough to co-operate properly with his architect in stating his requirements within his house should refuse to perform a similar function when the question becomes those portions of his home which lie outside of the actual structure, is not easily understood. Yet such a spectacle not infrequently confronts the American

architect of standing, to the detriment of his work and the ultimate dissatisfaction of his client. It is difficult to make a client admit to himself that he requires expert advice in laying out roads, planting trees, bushes and shrubs and the like, and that these features really have any material effect upon the utility and integrity of his house.

The prestige of the American architect has not yet reached that stage at which he is able to insist upon this matter wherein his English brother has decidedly the advantage of him. Before our architects will be able to claim such prestige they will have to state the reasons why they should possess it, in terms which strike closer to the heart of the client rather than appeal principally to his sense of propriety and his imagination, in the latter of which he is sadly deficient.

Of the examples which have been selected to illustrate the foregoing remarks, the majority, it will be noted, are of small houses. This choice has been made not so much to give weight to the points that have been made either for or against recent domestic architecture in England, but rather to present that type of English country and suburban house which at present appeals most to the large class of individuals who are building up our suburbs with the modest five to eight thousand dollar homes which one could wish were more conscientiously planned and more skillfully designed.

H. W. Frohne.

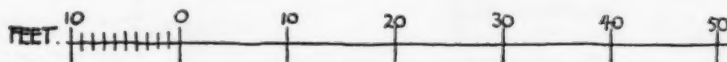
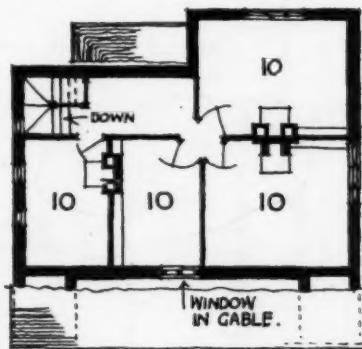
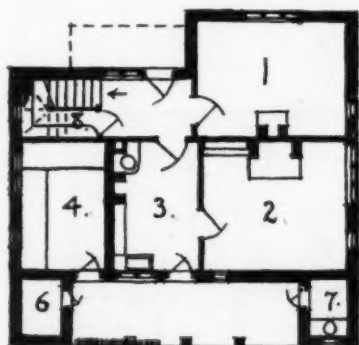




SEVEN BARROWS FARM.

Wareham, Dorset.

Forsythe & Maul, Architects.

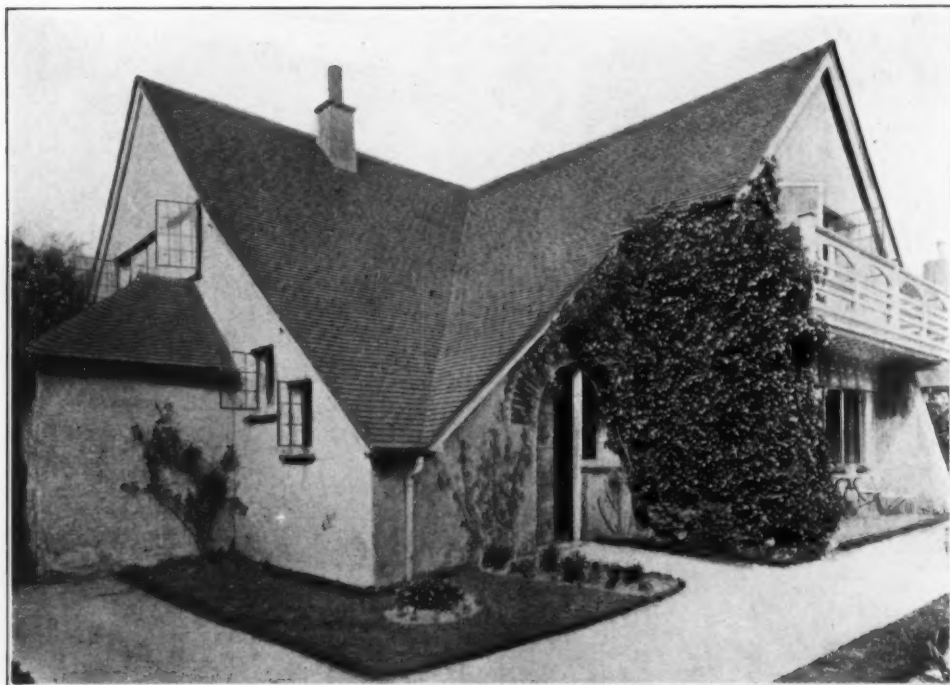


SEVEN BARROWS FARM—PLANS.

- | | |
|--------------|-------------|
| 1. Parlor | 6. Coal. |
| 2. Kitchen. | 7. W. C. |
| 3. Scullery. | 8. Larder. |
| 4. Dairy. | 10. Bedroom |

Ground Floor Plan.

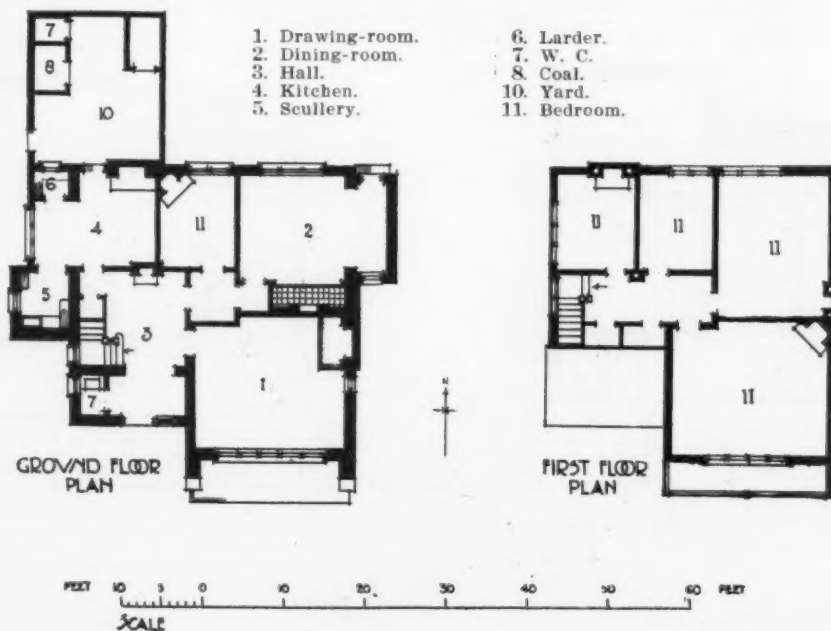
First Floor Plan.



COBBINS.

Blackheath, near Chilworth, Surrey.

C. Harrison Townsend, Architect.

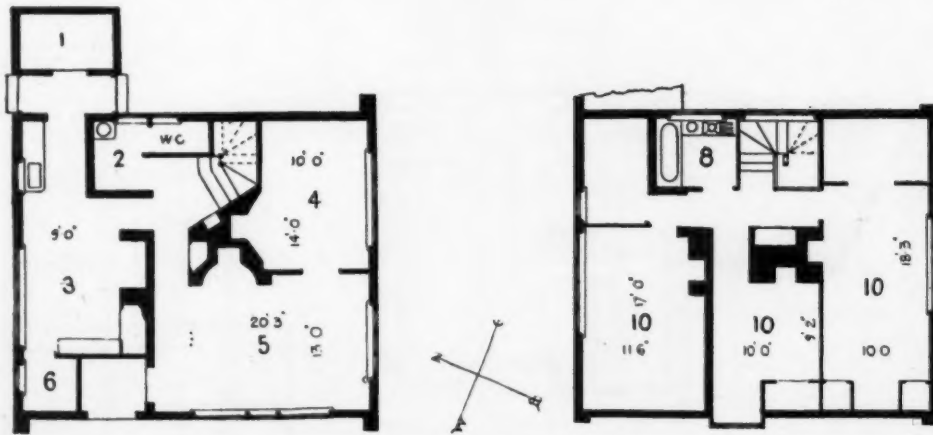




TILEHURST.

Bushey, Hertfordshire.

C. F. A. Voysey, Architect.



TILEHURST—PLANS.

- | | |
|--------------|--------------|
| 1. Coal. | 5. Hall. |
| 2. Lavatory. | 6. Larder. |
| 3. Kitchen. | 8. Bathroom. |
| 4. Parlor. | 10. Bedroom. |

Ground Floor Plan.

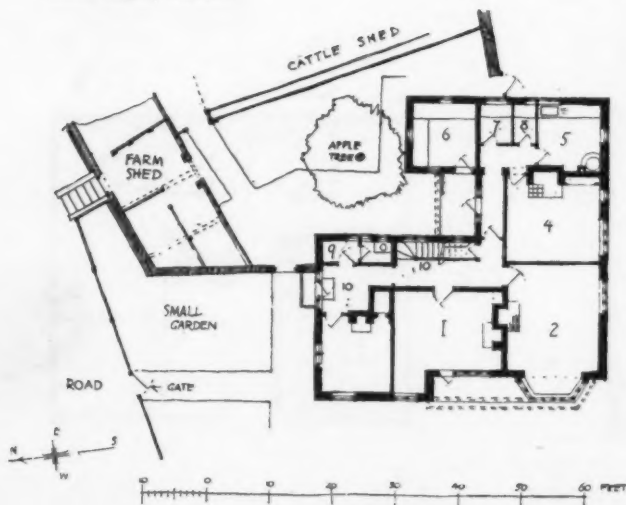
First Floor Plan.



Bere Regis, Dorset.

DODDINGS FARM.

Forsythe & Maul, Architects.

DODDINGS FARM—PLANS.
Ground Floor Plan.

- | | |
|-----------------|---------------------|
| 1. Parlor. | 8. Store. |
| 2. Dining-room. | 9. Lavatory. |
| 4. Kitchen. | 10. Entrance. |
| 5. Scullery. | 11. Bedroom. |
| 6. Dairy. | 16. Maid's Bedroom. |
| 7. Larder. | 17. Bathroom. |



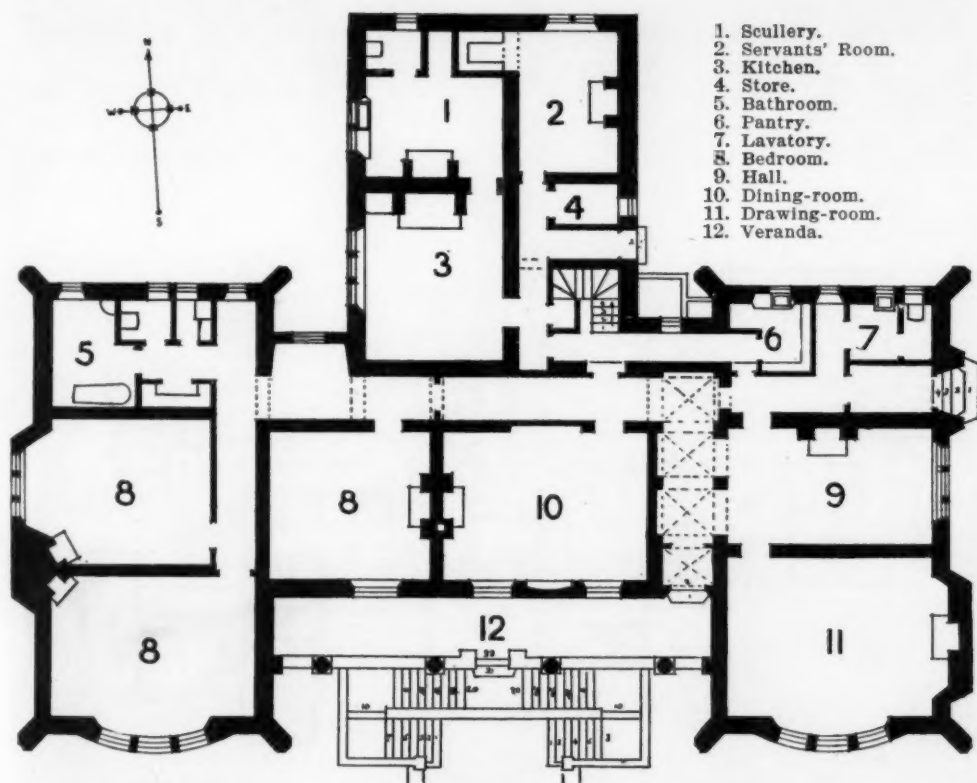
First Floor Plan.



ST. HELLEN'S HOUSE.

Dartmoor, Islington, Devon.

T. H. Lyon, Architect.



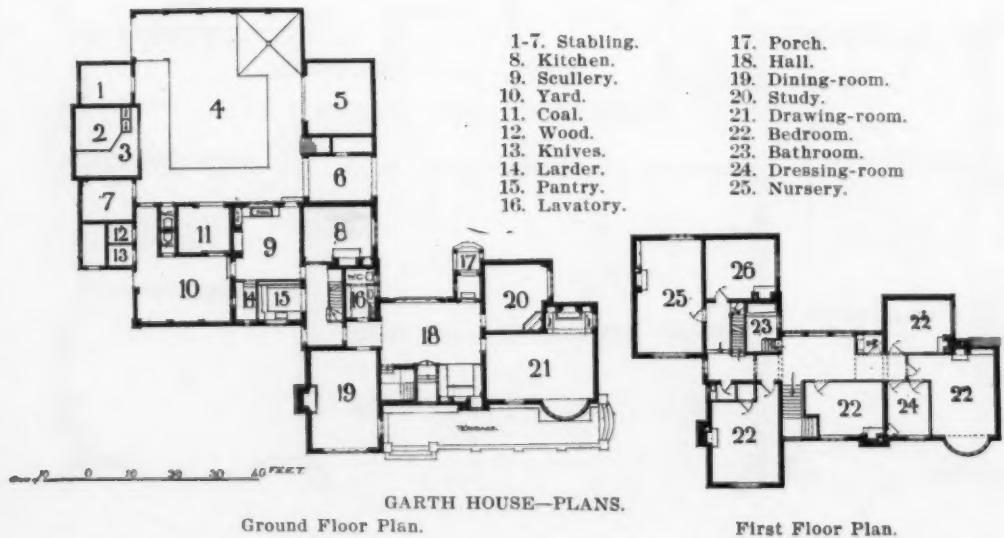
ST. HELLEN'S HOUSE—PLAN.



GARTH HOUSE—GARDEN FRONT.

Edgbaston, Birmingham.

W. H. Bidlake, Architect.

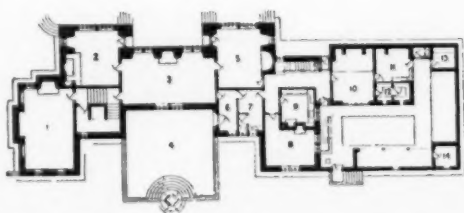




BARTON ST. MARY.

East Grinstead, Sussex.

Edwin L. Luytens, Architect.



BARTON ST. MARY—PLANS.

- | | | | |
|-------------------|--------------------|---------------|--------------------|
| 1. Billiard-room. | 6. Entrance. | 11. Scullery. | 15. Bedroom. |
| 2. Drawing-room. | 7. Lavatory. | 12. Larder. | 16. Dressing-room. |
| 3. Hall. | 8. Servants' hall. | 13. Boots. | 17. Bath. |
| 4. Court. | 10. Kitchen. | 14. Coal. | 19. Linen. |
| 5. Dining-room. | | | |

Ground Floor Plan.

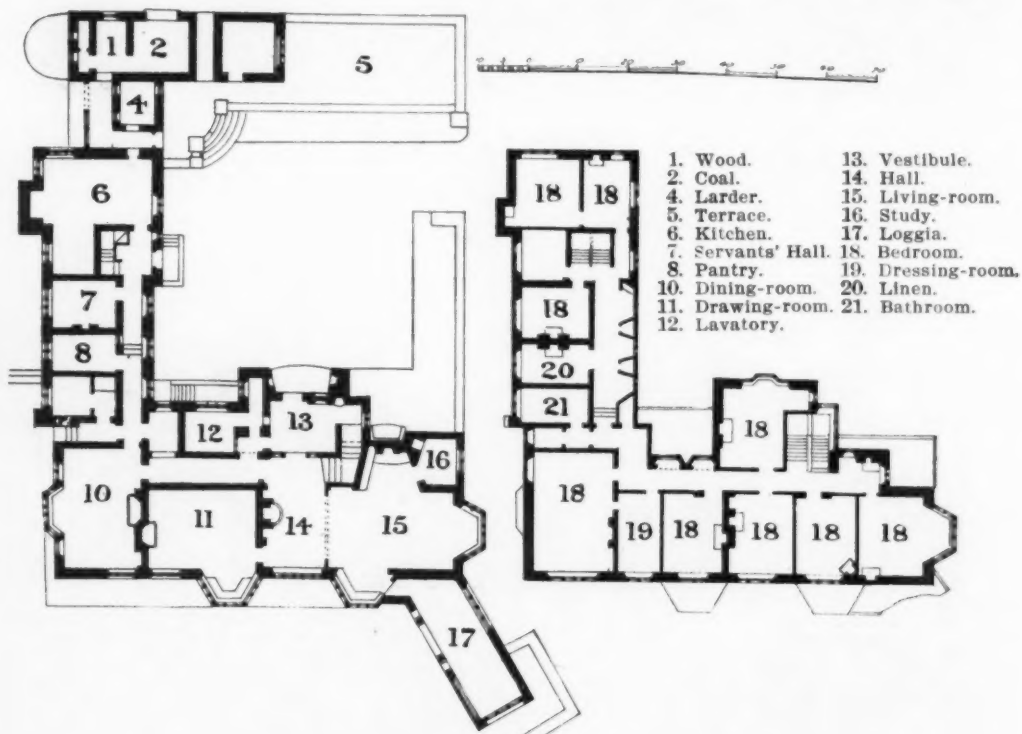
First Floor Plan.



ASHLEY GREEN.

Clappersgate, Westmorland.

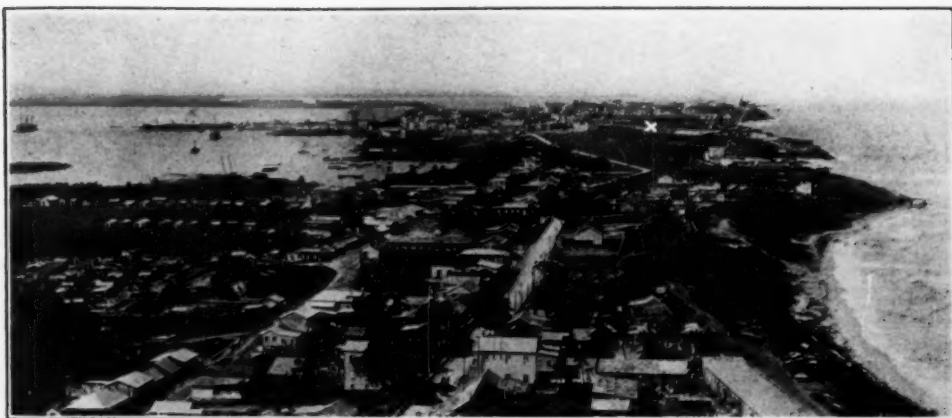
Percy S. Worthington, Architect.



ASHLEY GREEN—PLANS.

Ground Floor Plan.

First Floor Plan.



SAN JUAN FROM THE EAST.

"The general topography of San Juan resembles that of New York."

The New Capitol of Porto Rico

Prevailing Building Conditions on the Island

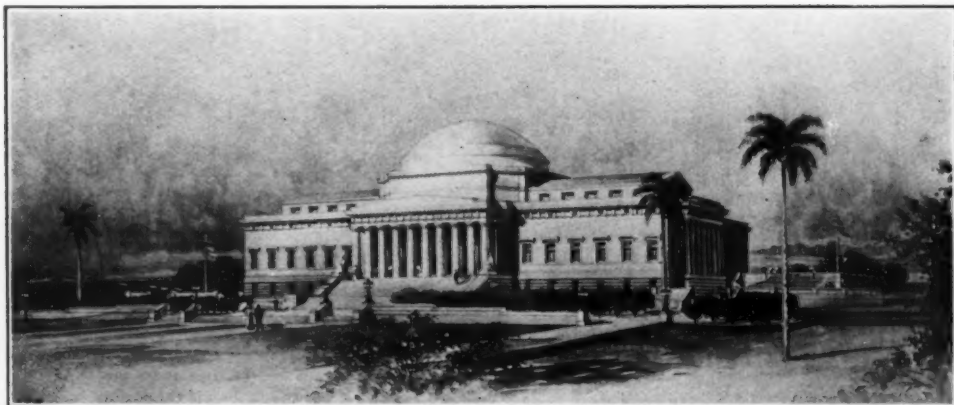
Since the American occupation of 1898, Porto Rico has progressed rapidly, especially under the wise direction of the last few years. In particular, the Department of the Interior and the Department of Education have produced results apparent to any observer now visiting the island. Not only is the good Spanish road and bridge work industriously continued, but new improvements and new buildings, both public and private, are appearing as never before, showing a rapid advance in almost every direction. Public school buildings are going up, not by the score, as formerly, for recently several hundred of the smaller schoolhouses have been provided for by a single appropriation.

With this rapid advancement of educational and business interests, both the Federal government of the United States and the Insular government of Porto Rico have felt the need not only of larger governmental accommodations for their employees, but of larger hospitals, prisons, court houses and internal revenue accommodations. The Federal government has, therefore, made appropriations for a building to contain all its chief offices, and it is expected that this

work will be rapidly carried on by the United States Treasury Department.

To satisfy the urgent needs for accommodating both branches of the Legislative Assembly and the Supreme Court of Porto Rico, a new building will be erected at once, by legislative act of March 14, 1907, to be known as "The Capitol of Porto Rico." It is expected that actual work will be commenced upon this edifice during the present winter, as three hundred thousand dollars have already been allowed by the Legislature for the purpose.

This capitol is to be erected by the Insular government of Porto Rico upon the crest of the hill at the center of the city of San Juan, a few hundred yards east of the ancient Spanish fortress, San Cristobal. This site is one of the most prominent on the small island upon which San Juan is situated. It faces the harbor at the south and overlooks the open ocean at the north, while to the east the distant mountains of Porto Rico are seen piling up in sharp silhouette against the sky. The site divides the present business portion of San Juan at the west from the residential section at the east. The general topography of



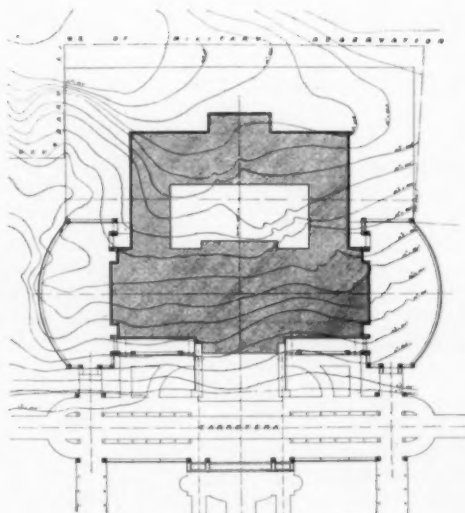
THE CAPITOL FROM THE SOUTHEAST.

San Juan, Porto Rico.

Frank E. Perkins, Architect.

the city resembles that of the Island of Manhattan, upon which New York is situated. In fact, if one is placed at the eastern end of San Juan and looks in a westerly direction, a miniature of Manhattan Island is spread to view, the ocean at the north replacing the Hudson River and the bay at the south resembling the East River and the harbor of New York.

The general arrangement of the capitol building provides for the threefold purpose of insular government. From a central domed vestibule the Executive Council (or Senate) radiates to the right, and the House of Delegates (or Representatives) to the left. The Supreme Court is in the rear, overlooking the sea, where a considerable open space will separate its sessions from the more public vestibules and visitors' galleries of the two houses at the front entrance to the edifice. The entire system surrounds a partially covered *patio*, or



Block Plan.

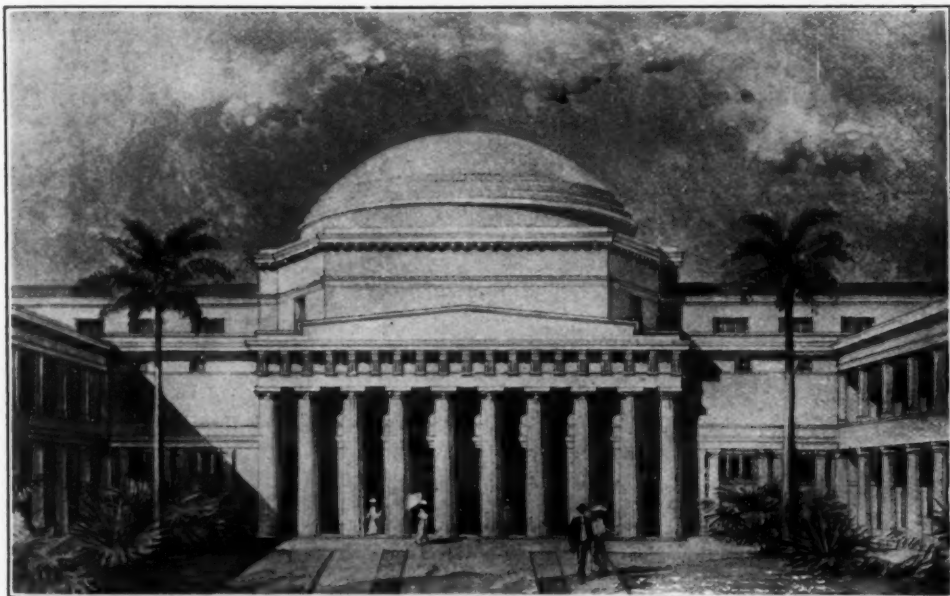
courtyard, where verdure and fountains may give a touch of nature to a secluded corner. The central domed vestibule will be partially open at the top, similar to the Pantheon at Rome, in order that a free circulation of air may cool the interior and a small amount of direct sunshine may prevent the collection of dampness so generally found in a moist climate. This domed rotunda, with its encircling

corridors, will serve as a Hall of Fame, in which will be installed monuments to those who have served their country.

The architectural style is southern, being an adaptation of the architecture of Greece, tempered by a knowledge of the Roman arch. This style is here applied to the needs of an insular people, living in a warm climate, but in a country liable to cyclones as well as to earthquakes which the Greek architecture has resisted for thousands of years. To-day we can constructively aid this style by

reinforcement with hidden steel sinews, but, from an æsthetic standpoint, it was considered that the style should have all the appearance of the solidity required in a climate of such variable moods. The Greeks were the first great architects of a refined style. Their architecture formed the basis of the best building in the semi-tropical climes, and it seems but proper that the style of the

seasons, usually in the fall, this wind may increase to a cyclonic velocity, and, with all the peculiar tendencies of that phenomenon, may twist structures out of all resemblance to the works of man. During a recent cyclone entire villages of wooden houses were destroyed, and, in some cases, brick walls more than a foot in thickness were carried away by the strain brought upon them.



THE PATIO OF THE CAPITOL.

"The system surrounds a patio—where verdure may give a touch of nature to a secluded corner."
San Juan, Porto Rico.

Frank E. Perkins, Architect.

Parthenon should be renewed in the entrance to the Capitol of Porto Rico, that edifice from which wise legislation will emanate for the benefit of the people of a new colony.

As has been intimated, the natural and climatic conditions of Porto Rico are peculiar. It is only after a visit to the Windward Islands that one can appreciate that name. A constant breeze blows from the northeast, seldom variable except during the months of May and November. Such is its strength, even in the warmest portion of the day, that a kite may usually be flown from the hand without running. In certain

The temperature of Porto Rico seldom exceeds a maximum of about 90 degrees and a minimum in the vicinity of 65 degrees Fahrenheit. The climatic conditions, therefore, call for open windows during the entire year, and the problem is easily solved by shading all openings with blinds, and by preventing the entrance of a driving rain by the use of wooden shutters. Very little glass is used in that country.

For some reason the climate is very moist. This may be due to the action of a warm sun upon the water surrounding an island of but one hundred miles in length. It is a fact, however, that

the night dews are very heavy, and especially so in the mountains. Everything is slightly damp if not in the direct sunshine. Silk, rubber and paper quickly rot and fall to pieces. Iron rusts so easily that even galvanizing is not a protection, and it should be often painted. Bronze becomes a pure emerald green color in a short time. Considerable zinc should be used in all paint for exterior work, and, of course, varnish is worthless out of doors.

The old Spanish constructions are either of rough masonry or are built of a large flat brick, made by hand and poorly baked. Wood is very scarce and expensive, and about one-third the cost of manufacturing the average brick is expense for the wood used in its burning. Most building materials, including wood, cement, iron and almost all electrical equipment and plumbing fixtures now come from the United States. The stone of Porto Rico is chiefly limestone and is not quarried in large pieces.

A search for proper building material for the capitol resulted in the belief that reinforced concrete was the form of construction best adapted to the prevailing conditions. The eruptions at Martinique and the earthquakes of neighboring islands indicate that the tremblings at Porto Rico may become severe at any time. In addition, a dome erected in an exposed position in a cyclone country should be well anchored, and no other fireproof construction so well protects its iron from corrosion. These conditions, while suggesting a choice of a Græco-Roman style of architecture, at the same time required the use of such forms as would be readily adaptable to

reinforced concrete work. While the capitol dome supports itself naturally upon heavy masonry, well calculated to resist any natural thrust, a reinforced concrete construction can be used as an extra precaution to suit the peculiar and unavoidable local conditions. Surely a wire basket, cast into a block of stone, should resist earthquake and cyclone as well as any non-corrosive construction obtainable.

The labor conditions in Porto Rico are good. The laborer works well, although not as well as the laborer of a cooler climate. The eight-hour law prevails generally, and labor is cheap. Masons earn \$2.00 per day, and carpenters \$1.75, while either a mason's or carpenter's laborer—*peon*—is paid 75 cents per day for his work.

Barter has much to do with the price of everything, and there are many gold bricks for sale in Porto Rico, as elsewhere. Even the native Porto Rican farmer—the *gibaro*, as he is called—is so noted at a bargain that there is an old Spanish saying, "*Para un gibaro, otro; para dos, el diablo*," the meaning of which is that, at a bargain, "It takes one farmer to beat another, and two will beat the devil."

The laws of Porto Rico provide that the Department of the Interior shall make all building contracts for the people. This department is now under the able direction of the Hon. Lawrence H. Grahame, Commissioner of the Interior, and, judging from the energetic manner in which the work has been started, it is expected that the Legislature and Supreme Court of Porto Rico will soon be housed in the new capitol.

Frank E. Perkins.



DETAIL OF ENTRANCE TO "TOKENEKE PARK," DARIEN, CONN.

The Economic Development of Building-Estates

There are few kinds of out-door works which offer such opportunities for business acumen, in combination with artistic talent, as the economic development of building-estates. Not only sound mechanical work, but artistic work, must to-day be the maxim of the company wishing to create a desirable clientele. Yet even rough workmanship, if counterbalanced by good taste, will pay better in hard cash, than will the old-fashioned type of rectilinear layout, even though framed by finely macadamized roads and well-curbed side-walks.

Realizing the growing demand of the country-loving public for beautiful or picturesque homes, realty speculators are rapidly buying up the most desirable areas for intermural homes. The majority of these properties are wholly undeveloped, are in most cases thickly wooded, and often of a highly attractive nature. Such do, in fact, supply the majority of our second and third class country homes.

To retain the intrinsic beauty of these properties, and at the same time to open them up in a practical and economic manner, offers many and interesting problems to both management and purchaser. And it may be pointed out here that unless there is an honest desire on the part of the management to please as well as to sell, and a willingness on the part of the purchaser to co-operate with the management, there will be endless conflicts and discomfortures for both parties. For no matter how the "communistic" idea may be scouted, in rela-

tion to a purely business proposition, success can only be obtained in enterprises of this kind, where there exists a cordial spirit of reciprocity. All has not been said when dollars have been given for deed.

The following are a few of the points of interest which are common to all such enterprises.

The first problem presented in dealing with properties densely enveloped by mature woods is the thinning out of the trees. This is a partly utilitarian and partly artistic problem. The advantages obtained by this process are first, to secure to each house-holder a fair share of the best views, and second, to increase the beauty of the landscape. Viewed as a unit in a landscape, thick-growing woods have little artistic value. In order to break the monotony of such dense masses, the woods must be broken up into irregularly disposed units, varying from single isolated specimens to large masses consisting of one hundred or more trees. The disposition of the masses should largely be determined by the existing topography and suggestive features of the land. Thus rugged heaps of large boulders with cedars, pines, or other local plant growth interspersed among them; splendid specimens of single trees, attractive for their age and size; or steep and rough hillocks, unsuitable for sights, but attractive if properly supplied with plant growth, will supply the minor units. Larger masses will be provided by leaving untouched such spots as will not be improved by



The plant-spacing here shown gives an accurate idea of the effect to be aimed at in the "thinning" of thickly grown woods. The same effect should be striven for if original planting has to be undertaken.

cutting. The average wooded landscape will offer enough of such characteristic features to amply clothe the property. In order to secure a satisfactory distribution of views, it will occasionally happen that more thinning will be required than is demanded by a strictly artistic judgment. In that event, artistic preference must give way to sound common sense. The operation of wood-thinning along these lines is a fascinating one, similar in principle to the cutting of a rough block of marble to the finished conception of the sculptor, while it is also of no small economic importance. Building lots, in themselves highly attractive, but which are shut off from all views, owing to the contiguous tree growth, are practically unsalable at remunerative figures. Hence the obvious importance of thinning the woods before the sale of the lots. Every lot or estate sold later blocks the operation, and, according to its situation, size and the tree growth upon it, lowers the value of the back lots; and it will be found that every private owner is super-jealous of trees on his own property, and serenely indifferent as to their effect upon his neighbor's view. The cost of cutting is more than offset by the sale of the timber, and the cost of securing a topographical map is greatly reduced by opening up the woodland.

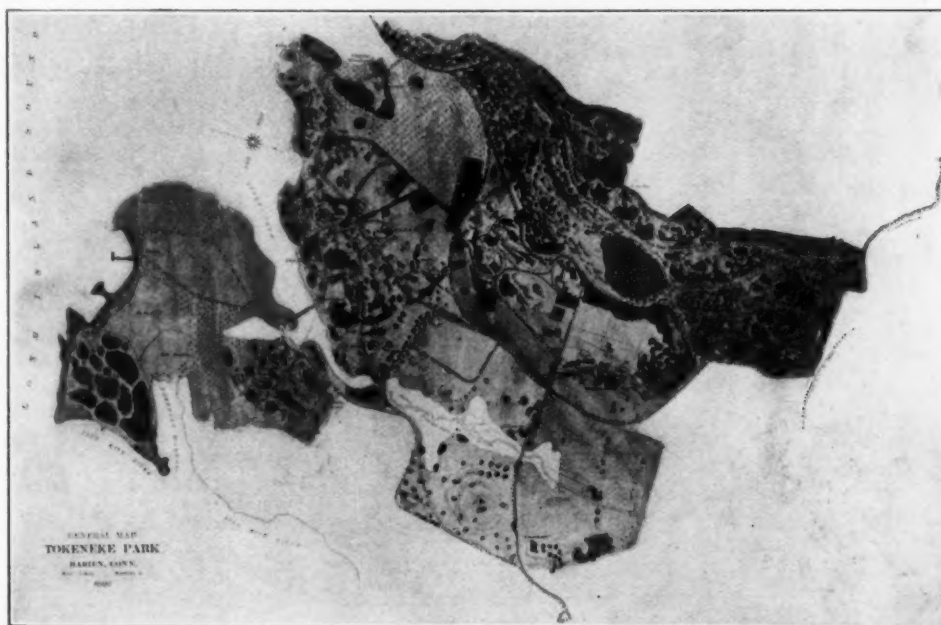
The importance of making a general plan of the whole area to be treated is not limited to securing efficiency in the

planning and execution of the work. To a large extent, the value of property depends upon its probable future environment; hence to every purchaser should be presented a general plan to become, as it were, a part of the contract of sale. Such a comprehensive scheme guarantees to each owner the character of the development predetermined in the neighborhood of his lot, and is a forceful incentive to intending purchasers and builders; while the absence of any such plans is presumptive evidence that the company has no settled policy, save to sell the property, depending upon the undirected currents of commercialism to settle its destiny. A plan of this kind should show the alignment of the road system, the approximate location of the house site, the proposed planting system, and, if any, the "reserved" areas. In respect to this latter item, it may be said that every building estate pretending to any dignity and stability reserves for the general benefit and use of the lot holders certain areas which are respectively to be used for small parks, sites for church, school house, public stables and for the future building of shops and other forms of public houses.

The endeavor to create an artificial standard of excellence in the development and maintenance of the individual properties, by including in the contract of sale a series of restrictions, is not an attractive policy. Restrictions not in line with the future development of

the property will never be enforced. And yet it is essential to fix a standard in order to inspire confidence in the minds of prospective builders and owners. As a general principle, individual owners will develop their properties in accordance with the standard of excellence maintained by the company. The basic points in the artistic development of a building estate are the alignment of roads, the subdivision of the property into building lots, the

massed plantations, is in bad taste and futile. The most satisfactory results will be attained by adhering to a simple, straightforward design, substantially composed of straight lines and suitably diversified by the use of diagonals radiating from a circular or "square" centers, and by the introduction of semi-circular or crescent terminals. Where, however, the ground to be treated is of a picturesque nature, a freer procedure should be followed.

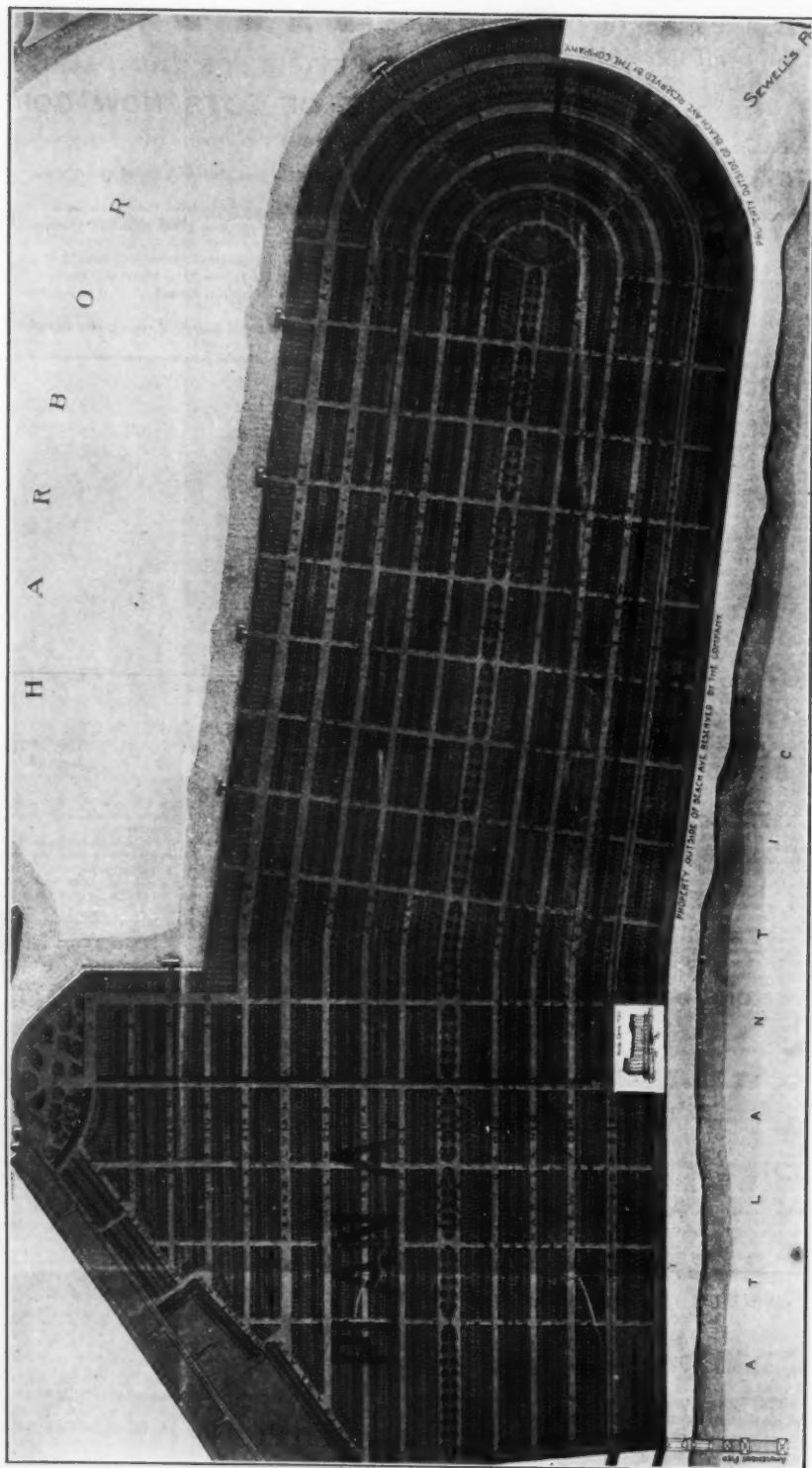


Such a map as the above should be prepared by all building estate companies, in order that intending purchasers may be assured of the general policy of the company, the character of the property, and the proposed developments.

location of the house sites and the regulation of the style of architecture.

The topography of the property should determine the alignment of the roads and the boundaries of the separate lots. A fitting plan must be designed, and its attractiveness will depend entirely upon the skill and taste of the designer. For the lay-out of a level stretch of land the plans should be formal, for where there is no "natural" basis on which to build, the attempt to create picturesque effects by the forced use of curvi-linear lines and

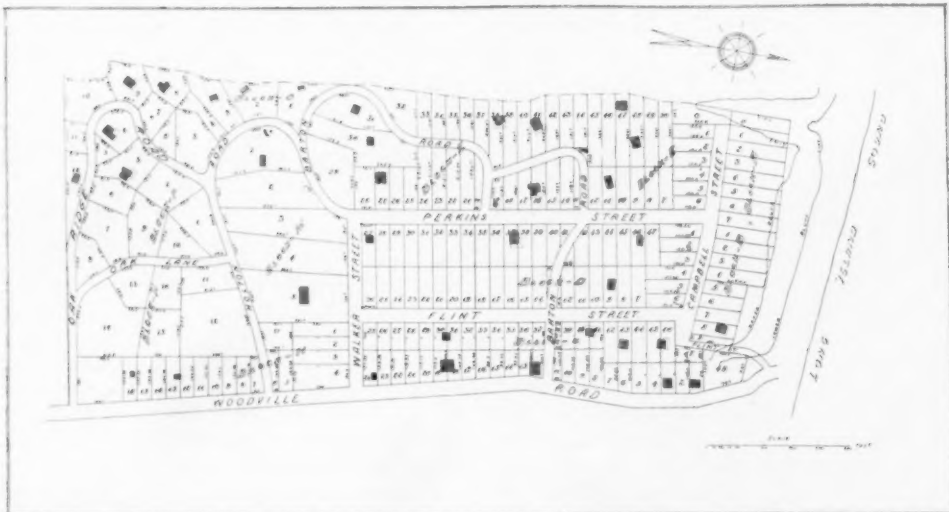
A topographical map, no matter how complete in detail, cannot indicate the essential points which should determine the alignment of the road and subdivision of the property. Rightly conceived, the road system of a highly diversified landscape should grow out of and emphasize the dominant features of the land. Such a result can only be obtained by a personal and intimate acquaintance with the property, acquired by tramping over the land until its character and the conditions to be dealt with have been fully comprehended. Roads and boundaries



The above plan is an excellent example of the correct use of "straight lines and crescent terminals," or in other words, of the "gridiron" system. The entire property has been raised twenty feet above "swamp-level," and has not, therefore, any "natural" characteristics which should determine the alignment of the roads and the sub-division of the building lots. Any attempt to introduce informal lines or to secure "naturalistic" effects would not only be futile, but in bad taste.

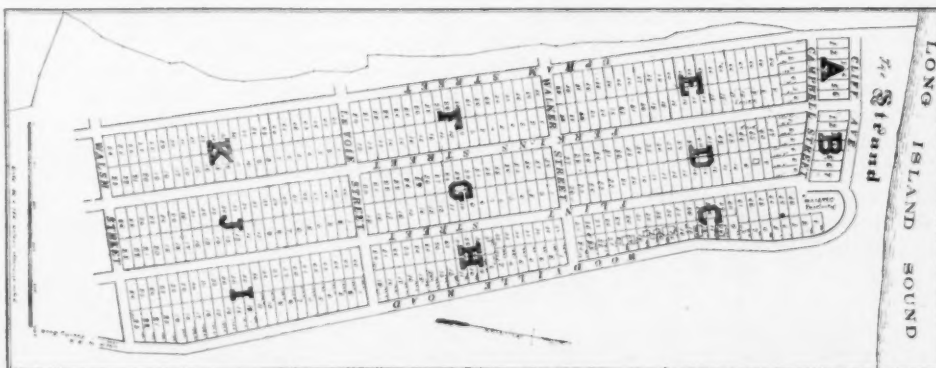
should be "staked" out by eye, in conformity with the determining features of the land, and then surveyed for the final mapping. Minor inconsistencies can then be corrected and the "natural curve" reduced to mathematical lines in

attempt to equalize the frontage or area of the lots on irregular land is not feasible. The value of the lot is determined by the house site, and the amount of ground attached thereto should be in accordance with the logic of the to-



Oak Ridge, Long Island.

Comparison between these two plates affords an excellent example of the diverse results obtained in the development of a given property by the use of different systems. The lower shows the use of the "gridiron" system without reference to the topography of the land. The upper shows the same property laid out by the method explained in the text. The property is of a highly picturesque nature, composed of irregular formations. To have forced upon it the iron-clad system as planned for below would have utterly destroyed its natural beauty and more than doubled the cost of the road construction.



order to facilitate the deeding of the lots. Only thus can the site be treated with a freedom and consistency which will preserve and develop its natural charms. (See plate V).

It is well to point out here that any

pography. For, other things being equal, a good site—that is, a lot which is good ground to build on, and which offers good views—is worth more than a lot of greater area, but lacking in these qualifications.

Having thus far subordinated the plan to the inherent characteristic of the land, it is of quite equal importance that the same spirit of adaptation be maintained in the buildings. Nothing is more objectionable than a lot of structures out of harmony with each other and at odds with their environment. In the attempt to regulate the placing and styles of the various buildings, several points should be borne in mind. Every large tract of land will have its differently characterized sections, and these differences will have been intensified by the "logical" alignment of the roads and subdivision of the lots. It is therefore advisable that the management should select one or two or more of the sites in each of the localities for the purpose of building and improving the ground thereof in styles appropriate to their several characters. Care should be taken in the selection of sites to be treated that their distribution be such as to constrain individual owners of the remaining lots to correctly locate their own structures. The two points to be kept in mind are that the houses be placed in accordance with the axis of the site and in such manner as to prevent the exclusion of the several views.

If the development of the estate is to continue for several years, which is generally the case, and along lines which tend to maintain the rugged charm of unpolished scenery, the roads should be finished in native gravel, rather than with the highly polished "screenings" of the conventional macadam road, and at first, only the central parts should be constructed, leaving grassy spaces on either side, until the estate is sufficiently inhabited to justify their full completion.

Too early developments of this kind not only increase the initial outlay, but tend to impair the natural beauty of the landscape—which is the drawing feature for the majority of buyers. Every improvement should be made with this caution in mind.

The approach and main entrance of a building estate is a point of considerable importance. It should always be attractive and clearly indicative of the character of the estate. Much can often be accomplished by slightly altering and improving the highway in the neighborhood of the entrance. If, for example, the entrance be at a turn of the highway, the latter should be so altered as seemingly to lead direct to the estate. If it be at right angles to the highway, an exceptionally wide and inviting gateway should be constructed, and, where possible, a corresponding widening of the main road opposite the entrance. Alterations, such as these, if accompanied by judicious planting, tend to attract the eye of the passerby.

A point of practical importance to both management and client is the establishment on the estate of a nursery of the most useful variety of plants. A few acres of ground devoted to this purpose will be sufficient to supply the needs of both the company and the future purchasers of lots; large quantities of young plants may be purchased at relatively low prices, and may be sold at a fair profit by the company and purchased by the lot holders at moderate figures. The mere fact of the existence of a nursery on the property is in itself an incentive to private owners to improve their holdings by decorative planting.

George F. Pentecost, Jr.

✓ The Architect in History

II.

Roman Architects—Part II.

BUILDERS AND GUILDS.—The accompanying illustrations are of architects' instruments, masons' and carpenters' tools, found at Pompeii and preserved in the Museum of Naples. There are rules, squares and compasses of different models in excellent preservation. One of the compasses is intended to use of the curved surface of columns, others for work in relief. There are bobs of two different patterns. In less good preservation are the carpenters' and masons' tools reproduced on page 292.

The specifically architectural implements are reproduced in relief on a number of sepulchral slabs of deceased architects. The one I have selected to reproduce, though it has not as large a number as some, is especially interesting for the figure of the architect himself, in his working costume. He is holding in his left hand what seems a straight rule and a small drawing-board, probably either covered with wax or parchment, on which he is drawing with a stylus, held in his right, the sketch for some buildings (page 282).

The social status of this architect is evidently inferior to that of the architect of the column of Theodosius, given on page 282, who is holding the plan of his column. His long robes give him a senatorial aspect, and he is evidently a court official of some rank, a position often reached by the prominent architects of the later empire.

PUBLIC BUILDINGS. ERECTION AND SUPERVISION.—The method of putting up public buildings among the Romans of the republic was this: The two censors, magistrates who were selected annually, as a sort of judges of the Supreme Court to purify the Senate and the knights by expelling the unworthy, and to put down abuses, also had charge of the funds for erecting and repairing public buildings—temples, law

courts (basilicas), forums, gates, colonnades, markets, bridges, etc. Sometimes they worked in common, sometimes each of the two would manage his share of the funds.

Their jurisdiction extended not merely over the city of Rome, but over all Roman colonies and territory. In Livy's history, one can follow, year by year, the doings of these censors over a period of two centuries.

Their custom was to proclaim what building they intended to erect and publish the specifications, inviting bids and assigning the work to the lowest bidder.

The habit of letting out all public works to general speculating contractors, in contrast to the Greek method, may partly explain the lack of quality in the details of Roman architecture, as there was practically no artistic supervision in the interest of the state.

Polybius, the historian, who wrote when Rome had just had its first great building "boom" after the Punic wars, undoubtedly gives the correct view when he says: "The Senate controls also what is by far the largest and most important expenditure, that, namely, which is made by the censors every *lustrum* for the repair or construction of public buildings; this money cannot be obtained by the censors except by the grant of the Senate."

At the same time, there were two exceptions to this rule. The first was when the Senate, or a colony or municipality, appointed special officials to attend to the erection of special buildings. They were called *quinquevirs*, *triumvirs* or *duumvirs*, according as they formed a committee of five, three or two, and their functions lasted as long as the work. Duumvirs were appointed, for instance, by the Senate in 272 B. C. to build the Anio aqueduct; others, in 180 B. C., to contract for the Temple of Fortune.



Architect of the Column of Theodosius at Constantinople.



Tombstone of an Architect.

The second exception was when the *aediles*, who had charge of the maintenance and administration of public buildings, also devoted to the erection of some public structure the sums they had collected as special fines. In this way the Temple of Faunus was built in 198 B. C. from fines inflicted on the lessees of public pastures.

Finally many structures were erected as votive offerings by victorious generals out of the spoils of the enemy, and were outside of senatorial jurisdiction.

The *aediles*, mentioned above, generally notified the censors of all necessary repairs. Each of the four *aediles* had a special district in Rome, corresponding possibly to the four regions of the Servian city. Their influence on architecture was increased by the authority given them to determine the alignment of streets, the allowable projections in houses, and to order any building demolished that did not conform to the building regulations. In the colonies and municipalities dependent on Rome, they even cumulated the functions of the Roman censors.

ACCEPTANCE.—The method followed in the acceptance of public buildings under the republic was usually the one referred to by Livy under the year 586 U. C. (= 168 B. C.), when the censors petitioned the Senate that the time allowance of a year and a half allowed for enforcing the repairs of buildings and for approving the execution of works contracted for, according to custom, should be prolonged in this particular case.

The approval of public works was a matter of serious moment for the officials in charge of them on behalf of the state, because a period of twenty years was set within which they were responsible for any defect, and it was made good at their expense, for the contractor had been discharged of all responsibility as soon as his work was accepted. So we may be sure that the examination was not perfunctory! Would not this be an excellent way in which we could imitate Rome? This is also the main reason for the many inscriptions of the republican and Augustan ages on bridges, gates, walls, arches and other public works, naming explicitly the magistrates who had approved and accepted the work—*probaverunt*. This saddled the responsibility on the proper persons, their heirs and assigns. A typical inscription is that of the walls of the city of Ferentinum (page 283), of the republican age, where the two Roman censors, Hirtius and Lollius, are made responsible. It is CIL. x, 5837.

A. HIRTIVS, A. F., M. LOLLIVS, C.F., CES FVNDAMENTA COERAVERE EIDEMQVE PROBARE.

Of course this made it doubly important that the state officials should have the best expert advice, as they were themselves not competent to judge. It was by these experts, employed by the state, that the specifications and contracts were drawn up which were given out by the censors. It was they who must also have inspected—though we can only surmise it—the finished work. These state architects and engineers, whether regularly attached to the government offices or independent men called in for the occasion, were supplemented by the building surveyors, *mensores aedificium*, who calculated the square feet of every structure before it was accepted.

EXPROPRIATION OF LAND.—The expropriation of land for public works is occasionally referred to. It was not always possible to overcome private refusal to sell, as the Romans were ten-

acious of their private rights. M. L. Crassus, in 180 B. C., prevented the construction of a new aqueduct, universally desired for Rome, by refusing to give it right of way over his land.

cient for the concrete and rough brick cores; ability of the state to enjoin material and labor free of cost, especially under the late Empire.

Later I shall give some of the younger



VIADUCT AT FERENTINUM—WORK OF NATIVE ROMAN ENGINEERS OF REPUBLICAN AGE.

COST OF PUBLIC BUILDINGS.—The cost of public buildings was relatively smaller than in Greece for several reasons: unskilled workmen for the details; gangs of cheap laborers, who were suffi-

Pliny's statements as to the cost of building in Asia Minor. Frontinus, in his work on the aqueducts of Rome, of which he was inspector, says that the Aqua Marcia aqueduct cost 18,000,000



TEMPLE AT TIVOLI—WORK OF HELLENIC ARCHITECTS OF REPUBLICAN AGE.

sesterces, or about \$750,000; while from Pliny, the elder, we learn that the most sumptuous of these aqueducts, the combined Anio Novus and Claudia, cost about 55,000,000 sesterces, or not quite \$2,300,000. How rapidly this sort of work was done is shown by the completion of the Marcia aqueduct in the second year over its total length of about fifty-seven miles.

EXPROPRIATION OF BUILDINGS.—Cicero wrote an interesting letter in 54 B. C. dealing largely with the restoration and enlargement of the Basilica Aemilia, in the Roman Forum. It touches on real estate expropriations and cost of building. He and Oppius were then censors. He says:

"Paulus [Aemilius] has almost brought his basilica in the Forum to the roof, using the same columns as were in the former structure. The parts for which he gave out a contract he is building on a most magnificent scale. [Oppius and I] have thought nothing of the 60,000,000 sesterces [= \$2,400,000] required for this monument. * * * The claims of private owners could not be satisfied for less."

The sums paid to private individuals for the land to be used for public monuments were often enormous. The properties expropriated for Julius Caesar's forum were valued at 100,000,000 sesterces, or over \$4,000,000.

The method at this time was to have the valuation made by the consuls on the advice of their assessors. We shall see later that Cicero felt aggrieved at the stinginess of the appraisal of his real estate damages made by these officials when the state was obliged to indemnify him on his return from exile.

CARE OF BUILDINGS.—While the care of public buildings in general was at first in the hands of the aediles, and then, under the Empire, passed into the hands of the department of the prefect of the city, there was a very peculiar arrangement by which a private individual would undertake the contract of keeping a public structure in perfect repair for a certain specified sum, furnishing bonds and sureties to the state.

Cicero, in his attack on Verres, gives

a graphic picture of the possible abuses of this system. A certain man had contracted to take charge of the famous temple of Castor in the Roman Forum. He died suddenly, leaving a son, who was a minor. The consuls of the year were unable to examine all the public structures to see in what repair they were, so were the praetors, to whom the work had been assigned; so the Senate decreed that the praetors Verres and Cassius should be charged with the inspection of the unexamined buildings. Verres then visited this temple of Castor for the purpose of finding an excuse to sue the minor's estate for breach of contract with heavy damages. But everything was in perfect order—ceilings, walls, columns. One of his henchmen, however, suggested: "Try the columns with a plumb-line; you can easily condemn them as out of plumb!" Verres actually reported that the columns must all be removed and rebuilt, and put in a big estimate for new material and workmanship. He had the contract for the work knocked down for 560,000 sesterces, the money to come out of the estate of the poor minor, whose trustee clamored that it could have been done by anyone for one-seventh of this sum—80,000 sesterces. It is to be conjectured that Verres pocketed the greater part of the difference, for all that was actually done was to take down a few of the columns and set them right up again, unchanged, with a crane, besides giving a new coat of plaster to the rest of the columns. It sounds quite modern.

Public monuments, as a whole, must be classified under two distinct heads: those of pure utility, which belonged largely to the department of the engineer; and those of more æsthetic character, which were the province of the theoretical architect. The first class were largely the work of government officials, the latter of private architects.

As I said at the beginning, there is also this difference between the two classes that the first was invariably the product of native Romans, while the latter was usually due to Hellenic architects from Greece, Asia Minor, Sicily or Campania, some freedmen and some slaves.

The plates of Ferentinum and Tivoli on pages 283 and 284 were selected to illustrate the contrast between the superb ruggedness of the former and the symmetry and finish of the latter.

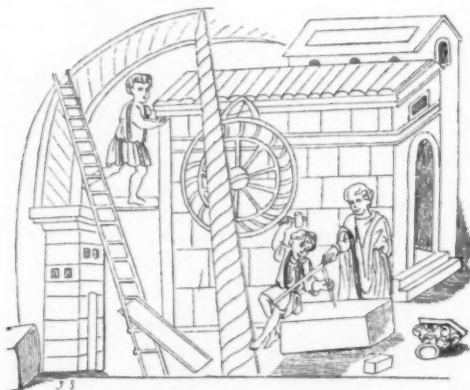
The case of Verres shows the methods in use for the care of the second class of monuments. The methods regarding the first class may be illustrated by the aqueducts. From Frontinus, himself superintendent of aqueducts under the Antonines, and author of the famous monograph on this subject, we learn that the usual custom was to arrange with contractors for the re-

by officials of building operations, so characteristic of Greece. Yet we know that such contracts and accounts were made; but they must have been on perishable materials, such as waxed tablets, papyrus, parchment, or bronze, for hardly a trace has survived, and we are but poorly equipped with detailed information as to the methods employed in the great building operations of a public character and the share in them of the architect.

There is just one document useful, though extremely modest: a bronze plaque, found at Pozzuoli (Puteoli), near Naples, where so many interesting buildings of Graeco-Roman art were built. As its date is 649 U. C. (= 105 B. C.), it certainly reflects the Roman building regulations of the republican age, which were practically the same in the Roman colonies of Italy as in Rome.

It begins with the *lex* or edict of the Duumvirs and Consuls of the colony, which shall govern the construction of a doorway to be made opposite the Temple of Serapis. The document continues, giving detailed specifications, as follows:

"The square beyond the public street is separated from it by a wall. In the center of this wall let the contractor open a door 6 feet wide and 7 feet high. He shall place against the wall, on the side toward the sea, in relief, two *antae*, with a projection of 2 feet and 1 foot thick. Above the opening he shall set an oak lintel 8 feet long, $1\frac{1}{4}$ feet deep and $\frac{3}{4}$ foot high. On the lintel, directly above the *antae*, he shall project two corbels of oak, $\frac{2}{3}$ foot thick, 1 foot high, projecting 4 feet on each side; and against the ends of these corbels he shall nail painted cymas. On the corbels he shall set two small pine beams, measuring $\frac{1}{2}$ foot on each face, and shall fasten them with nails. He shall attach to them a line of joists of pieces of sawed pine $\frac{1}{3}$ foot thick each way, spacing them $\frac{3}{4}$ foot apart and setting on them pine panels made of planks 1 foot wide. He shall cover the ends of the joists with strips of pine $\frac{3}{4}$ foot wide, $1\frac{1}{2}$ inches thick, and over this he shall set a cyma, the whole being blind-nailed. He



Architect Supervising a Stone Building. Crane. Ladder, Staging, Wheel, Carved Capital. Stone Masons at Work Laying and Cutting Stone.

pairing of the aqueducts, these contractors being obliged to keep a certain number of slave workmen busy on the aqueducts outside the city, and a certain number within the city. They were obliged to register in the public records the names of these men who were in charge of this work in each region. They were obliged to obtain approval of their work from the censors, aediles or questors. Evidently in this and other classes of monuments the only concern of the state officials was the approval or rejection of work done.

EARLY SPECIFICATIONS.—It is curious that there should be such a scarcity in Roman inscriptions of information regarding public buildings. We do not find any of those numerous contracts, any of those elaborate accounts rendered

shall cover these two pent roofs with tiles: there shall be six rows of tiles on each slant, those of the first row being fastened to the pine strip. Finally, he shall cap the door.

"The same contractor shall make, set in place, furnish with iron fixings and coat with wax, two doors of openwork, with door posts of green oak, exactly like those made for the Temple of Honor. * *

Instructions for the masonry work:

"He shall add $\frac{1}{4}$ of slaked lime to the *pozzolana* (in making the cement). He shall not use unhewn stones any larger than would weigh, when dry, 15 pounds, nor any hewn stones longer than $4\frac{1}{2}$ inches.

"The work shall be subject to the control of the *duumvirs* and of the members of the Council of Puteoli, whenever there is a quorum of 20 at the time the matter is discussed. What these twenty accept shall be satisfactory, what they reject shall be rejected.

"Time for completing work: The first of the kalends of November.

"Times of payment: Payment shall be made in two halves: one-half as soon as satisfactory bonds have been given, the other half as soon as the work has been completed and accepted."

Then follow the names of the bondsmen, five in all, with the amounts for which they pledged themselves, headed by the contractor himself, C. Blossius, for the amount of his contract, 1,500 sesterces (c. \$60).

We may, then, assume that this document gives in a modest way the form of decree issued by the Roman censors for public works in the republican period. The plan of paying half the amount before the beginning of the work may be a remnant of Hellenic influence, which was soon to disappear, for while not absolutely certain, the indications are that under the Empire the rule was to make no payment until after the work had progressed.

CONTRACTS AND MANAGEMENT UNDER THE EMPIRE.—The radical changes brought into administrative methods by the Empire in Rome itself and the provinces affected the governmental re-

lations to the monuments. The old republican officials lost their power, which was transferred to the new imperial officials. After a while the imperial prefect of the city obtained the authority over public buildings, both new and old, which had previously been in the hands of the censors, aediles and praetors. Under the prefect was a corps of inspectors: an inspector of aqueducts, of public buildings, of sewers and of the Tiber banks. Various special taxes were assigned for the repair and running expenses of public buildings. Outside of Rome the taxes of each city were used for the construction and use of public buildings.

But whenever any great catastrophe, such as an earthquake or a fire, devastated a city—as in the case of Nicaea, in the time of Hadrian—it was rebuilt largely from funds contributed out of the Emperor's private treasury, and administered by officials dependent on him. Only seldom, as in the case of Laodicea, the inhabitants took pride in refusing all assistance. In some cases a public monument was built by voluntary contributions, as in the case of the great viaduct of Alcantara, in Spain, due to the associated efforts of eleven Spanish communes.

In the administration of the early Empire the distinction was clearly made between the provinces governed by the Roman Senate and those governed by the Emperor, the former a civil, the latter a military rule; and each was supreme in the provinces in the matter of public buildings. No city administration could put up a public building without the authorization of one of these two supreme powers. Even these authorities were, however, bound by certain general enactments of the Roman civil code, such as those regulating the heights of buildings, the materials, the width of streets, the restrictions in the use of balconies and other projections. Especially did the emperors of the later age find it necessary to enact against the destruction and omission to repair ancient structures and they forbade new buildings until the old ones were placed in good condition.



ARCHITECTS' IMPLEMENTS, MUSEUM OF NAPLES.

CITIES AND WORKMEN.—PAYMENTS.—The following petitions will show how magistrates of Egyptian cities under Roman rule managed public works:

The first is a letter addressed in 283 A. D. to the Chief Magistrate or *prytanis* of Oxyrhynchus in connection with work in a new street which he had built on behalf of the city. The Kasiotic joiners here mentioned were, as a class, the most skillful cabinet-makers.

"To Aurelius Apollonius, * * * * * councillor, prytanis in office of the * * * city of Oxyrhynchus, public magistrate, from Aurelius Menesthes and Aurelius Nemesianus, both sons of Dionysius, of Oxyrhynchus, Kasiotic joiners.

"We request that orders be given for payment to us out of the city funds on account of wages due for work done by us as Kasiotic joiners on both sides of the street built by you from the gateway of the gymnasium leading southward to the lane of Hieracius, of the total amount due for the whole works, in accordance with the vote of the High Council, namely, four talents and four thousand drachmas, I say 4 tal. 4,000 dr. And we beg you to instruct the public treasurer to pay us in full, as is usual."

PUBLIC PAYMENTS TO ARCHITECTS.—The relation of the city magistrates to architects and builders put in charge of public work is shown by a letter ad-

ressed in 201 A. D., by two of these men to the city officials who held the position of building commissioners:

"To Serapion * * * gymnasiarch in office, and Achillion exegetes in office, * * * from Diogenes, son of Serapion, and Lucius, son of Hermias, both of Oxyrhynchus, appointed by the city clerk, in accordance with the decision of the Council of Magistrates, to superintend the repairs and fixtures of the Baths of Hadrian.

"We request that we may receive out of the city treasury, in payment for material, three talents of silver on account, I say 3 tal., of which we will render due account."

QUARRIES: ARCHITECTS, WORKMEN AND TOOLS.—One of the regular duties of government architects was the supervision of the quarries. Throughout the Empire the most important sources of the immense quantities of rich marbles used in the revetments, the pavements and the colonnades of almost every class of buildings, were the quarries of Egypt and North Africa, particularly Numidia, with minor but important quarries in the Greek islands and elsewhere, such as those of the building stone of Istria.

The local district architect exercised general supervision, and he not only had an assistant but there was also a supervising architect in constant attendance at



ARCHITECTS' IMPLEMENTS, MUSEUM OF NAPLES.

each quarry as well as an administrator.

The importance of many of these quarry *chantiers* is proved by the thousands of men condemned to the quarries as convicts, to do the harder work. This corresponded to the galleys of the Middle Ages and the Renaissance, and the Siberian mines. It was the punishment meted out to many Christians when they were not executed, and was one of the principal government industries.

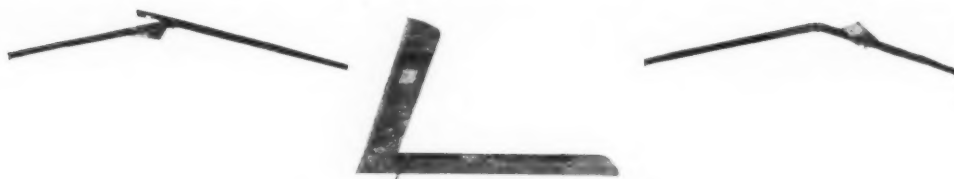
Many graffiti of workmen exist in the Egyptian quarries and show that their working was uninterrupted from the Ancient Empire to Byzantine times. The correspondence of the architects Cleon and Theodore under the Ptolemies, before the Roman conquest, shows what system was then in vogue: how the quarrymen were divided into squads of ten, headed by decurions; how the common labor was carried on by slaves, but the stonemasons themselves were free laborers; how the tools were supplied by the overseer or administrator. The workmen were given provisions from the public granaries. When their time was up they received a letter of discharge.

Through their decurions or *decatarchs* the free workmen were in frequent communication by letter, petition or verbally with the head district architect, for the purpose of securing the reform of certain abuses of the overseers, the quicker sup-

ply of tools, a change of work, or a supply of slave-laborers to shift sand that prevented access to the ledges, or similar matters.

The Ptolemaic system was continued under Roman rule, as was the case with so much of Hellenistic custom everywhere, but the work in the quarries acquired far greater and more artistic importance under the Roman Empire. With the Greeks it had been only the rough work, as a rule, that was done at the quarries, because all decorative and surface work was done after construction, *in situ*. But with the Romans a great deal of fine work was done before transportation, both in simple building materials and in entire finished pieces, such as monolithic columns and even obelisks, including the carving of capitals, friezes and other decorative work. This brought into play a much higher class of sculptors, and making of the directing architect a more important personage.

In fact it was this finished work that was personally connected with these directing architects. For example, the architect, Heraclides, had charge under Trajan and the early Antonines of the quarry of red granite at Fons Traianus, in Egypt. He signed his name to a column of red granite now in the Vatican, which is dedicated to Antoninus Pius or Marcus Aurelius. Then, the famous inscription on our New York obelisk



ARCHITECTS' SQUARES, MUSEUM OF NAPLES.

shows that it was quarried and finished under the architect Pontius, *architectante Pontio*. Pliny remarks that the architect-engineer Satirus had charge of transporting and setting up in Arsinoë the obelisk of Ptolemy Philadelphus. Finally a graffito in the quarry of Ptolemais, scratched probably by some quarryman, is addressed to the *eternal remembrance of the architect Diothemis*—probably a token of gratitude.

CONTRACT METHODS AND RESPONSIBILITY.—Although it is clear, from a number of inscriptions, that the plan to assign the construction of a building to the lowest bidder was far more common than the plan of doing it by day's work, except in the case of small structures, it is not nearly so clear as is supposed that the contract was ordinarily for a lump sum. In fact, the *payment by measurement* was very common.

When Vitruvius bewails the deceptions practised on their clients by architects who lead them into expenses they cannot afford through inexcusable underestimates, this cannot apply if lump-sum contracts had been universal.

Payment by measurement was called *per aversionem*. Late imperial legislation, with its customary policy of interference, tried even to legislate on the legal rate for such work. In Justinian's *Digest* the owner is directed, when making a private contract, to pay the contractor seven sesterces (= 28 cents) per square foot of stonework, to include both material and labor. We must believe that this official rate was in harmony with Diocletian's tariff.

This method was used even more in public buildings, judging by the importance of the guild of the *mensores aedificium*, a distinct class of architect-engineers, both in the employ of the state and professing independently, whose

sole occupation seems to have been the surveying and measuring of buildings, and whose reports were accepted as final by both contracting parties.

The entire matter can be studied in Pliny's interesting correspondence with Trajan in about 100 A. D., the best period of art. When Pliny was sent out by this emperor as special commissioner to Asia Minor to investigate abuses, he examined the accounts of several cities, especially as to the cost and condition of recent or unfinished public structures. In connection with the accounts of Prusa, he wrote to Trajan, asking him to send him a public surveyor to measure its recent buildings, to see if those who had the management of the public works had not overcharged.

In his reply, Trajan declined, adding this significant remark: "I have scarcely surveyors enough to inspect those works which I am carrying on in Rome and in its neighborhood," referring, probably, to such undertakings as the Circus Maximus, the baths of Trajan and of Sura, the Forum of Trajan—all in Rome—the ports of Ostia, Civitavecchia, Terracina.

Does this statement of Trajan not favor the supposition that in his time public works were neither let out to contractors for a lump sum, nor done by the State by day labor, but were contracted for by measurement? The masses of plain Roman construction in concrete, brick or stone, entirely separate from their decorative revetment, added afterward, and susceptible of coming under a different form of contract, make such a method most reasonable.

DEFAULT OF RESPONSIBILITY UNDER TRAJAN.—An entire absence of responsibility for defects in construction for all concerned—architect, contractor, government inspector—may also be inferred from Pliny's letters, at least for

Asia Minor. The old Roman method had been, as we have seen, to allow the government officials a year and a half before final acceptance of a work from the contractor, and to make these officials responsible for twenty years.

But nothing of the kind prevailed at this time in Asia Minor. Pliny found at Nicaea a large new theatre, partly constructed, but on which work was at a standstill. Ten million sesterces—nearly half a million dollars—had been already spent, but the walls had sunk and cracked so alarmingly as to cause the suspension of work, although private persons in the city had pledged themselves to build different sections of it at their expense; some were to erect the portico, others the gallery over the pit (*cavea*). No advantage could be taken of these generous offers, because it was impossible to complete the main structure, which had to be done first. There were also difficulties with regard to the new gymnasium, rebuilt after a fire.

Pliny's comments are interesting. He reports that the cause of the trouble was said to be that the walls, though 22 feet thick, were not strong enough to carry the superstructure, because the core was composed of quarry stones instead of concrete, and the walls were not strengthened with brickwork. But, Pliny adds, *these arguments are used by the present architect*, who is a rival of the architect first employed, who was probably dismissed when the settling and cracking occurred. There is not a word said about making contractor, city architect or city commissioners financially responsible.

We may draw the same inferences from what Pliny writes of the water supply of Nicomedia. Two unsuccessful attempts to construct aqueducts had recently been made; the first had cost the city \$125,000, the second about \$75,000. Pliny advises a third attempt.

PRIVATE ARCHITECTURE.—But it is only in dealing with private architecture that we can get close to the heart and life of the Roman architect, as our literary sources in nearly all cases deal with his relations to private clients.

Roman architects paid far more atten-

tion than their Greek confreres to the beauty, size and comfort of the private house, and it so happened, fortunately, that most of the intimate details we have of architectural affairs among the Romans are concerned with this private architecture. So the two classic civilizations supplement one another in our general study of the ancient architect.

THE HOUSE AND THE LAW.—In order to understand the arrangement, size and grouping of the different kinds of houses in Rome, we must first inquire into the influence on them of law and religion. Following the example of the sacred pomerium, which marked the city limits around the walls, each public and private building in the early city had its sacred area or precinct devoted to the gods, on which it would be a curse to build. It was the most practical and far-reaching way in which religion influenced Roman architecture, even though we distinguish in the background the very practical idea of the necessity for this free space as a defense against fire and attack.

It was a custom that certainly made for civic beauty, as it helped to give buildings a proper setting and prevented crowding. This rule, like the regulations as to width of streets, allowable projections and overhang, required depth of foundations, materials allowed and forbidden, maximum height of houses, all formed part of the legal knowledge necessary to an architect.

BALCONIES.—But legal usage was fluctuating. For example, under the republic projecting balconies had been strictly forbidden. This law had become almost obsolete in the time of Augustus. Still, not having been repealed, it could be applied at any time. Even as late as 368 A. D., at the close of the Empire, the prefect of Rome ordered all projecting balconies to be demolished. Yet other legal texts presuppose balconies and specify a minimum free space between balconies on opposite sides of the streets, which was 10 feet between private houses and 15 feet in front of public buildings. Nor were they allowed, when covered, to interfere with a neighbor's light.

PARTY WALLS.—In regard to this isolation and independence of each house in early times, Fustel de Coulange, in his masterly work, "The Antique City," says: "The same wall cannot be common to two houses; for then the sacred precincts of the domestic gods would have been obliterated. At Rome the law prescribed $2\frac{1}{2}$ feet as the width of free space that should always separate two houses and be sacred to the god of the

which each flat was occupied by a family. The early common materials, a timber frame and sun-dried bricks, formed too shoddy and insecure a structure; and to this drawback was added the increased danger of fire when the old tradition of the sacred area was weakened and adjoining houses were run up. Seneca refers to this danger, saying that it was often impossible to escape from such fire-traps.



WORKMEN'S TOOLS, MUSEUM OF NAPLES.

precinct." This was the law of the Ten Tables. This meant that the narrowest alley must have a width of five feet, aside from what belonged to the public.

Each house, then, was called an *insula* (island) and formed a miniature block. Aside from the very small number of private houses (*domus*), which were much smaller and lower, the greater part of Rome had been built up before the close of the republic in the form of large apartment or tenement houses of three, four or five stories, in

The decrease of religious reverence, as well as the increased value of land, made the law wink at the abolition of intermediate alleys and at the inordinate increase in the height of houses. Collapsing houses, cracking walls, weak foundations, became so frequent that stock companies were formed whose sole business it was to consolidate such buildings.

SKYSCRAPERS AND IMPERIAL REFORM.—Augustus had tried to remedy these abuses by insisting on a maximum height of 70 feet for new houses, and by legis-

lating on the material and thickness of the walls. Vitruvius describes the new type of Augustan tenement houses as having a framework of solid stone, and gives an interesting reason why kiln-dried bricks were not used for partitions and other house walls in the city, while they were popular in the country. He says it was because the law allowed the party walls of private houses to be only *one* foot thick, and that no high houses could be built on this basis with bricks, as they would not be firm enough.

Nero, again, in his far more extensive reconstruction, forbade party walls and insisted on the antique practice of isolated houses and blocks—*insulae*; but his reform, while affecting the work done at the time, was probably not afterward enforced on account of its excessive unpopularity with landowners and speculative builders.

A more particular description of what was done after Nero's fire is worth giving. His enormous palace, the Golden House, extended with its grounds over a large section of the burned district, from the Palatine across the end of the Forum, and occupying almost the entire Esquiline hill. The palace was framed in triple porticoes a mile long, and a lake, surrounded by groups of picturesque buildings, was created on the site of the present Colosseum. Landscape gardening was carried to great refinement, in combinations of wooden bosks, open spaces, terraces and vistas, in this large park set in the center of the great city. Tacitus says that the entire scheme was due to the architects. Severus and Celer: "The old-fashioned, and in those luxurious times, common ornaments of gold and precious stones were not so much the object of attraction as parks and lakes," filled with wild and tame animals and birds.

The palace itself was on a colossal scale and full of gorgeous and ingenious details. A statue of Nero, 120 feet high, could stand upright in its portico. Some of the halls were "overlaid with gold, set with jewels and mother-of-pearl. In the vaulted supper-rooms the ceiling compartments, inlaid with ivory, were made to revolve scattering flowers, and

through pipes diffusing perfumes among the guests. With similar ingenuity the main circular dining-hall was made to revolve on its axis."

The rest of the burned district was laid out, not as after the Gallic fire," says Tacitus, "without discrimination and regularity, but with the lines of streets measured out, broad spaces left for transit, the height of the buildings limited, open areas left, and porticoes added to protect the façades of the blocks of houses. These porticoes Nero agreed to build at his own expense," and he also agreed to clear the ground for building at his expense and to distribute rewards to the landowners who completed the reconstruction at a certain date. He had all the rubbish carted off on public ships and dumped in the marshes of Ostia. To guard against fire he forbade the use of party walls, obliged every houseowner to have fire-extinguishing apparatus in his yard and facilities for using it on the balconies above the porticoes which he had built. He improved the water supply to provide sufficient pressure. He specified that no timber should be used in the lower stories of any house, but that they should be arched with stone.

The Romans were pleased with the new city plan and new regulations, as both useful and beautiful. But some old fogies "believed the ancient form was more conducive to health, as from the narrowness of the streets and the height of the buildings the rays of the sun were more excluded; whereas, now, the spacious breadth of the streets, without any shade to protect it, was more intensely heated in warm weather."

We may acclaim Celer and Severus as the pioneers for Rome of those magnificent and broad civic plans that had been carried out at Alexandria, Antioch and other large cities of Asia Minor and Syria since the beginning of the Hellenistic age.

What most stood in the way of a thorough application of strict building laws in Rome was the fact that the building and renting of the tenement houses that formed the bulk of Roman real estate was a most profitable undertaking

and had fallen largely into the hands of rich speculators. We can understand what had then happened in the residential quarters if we know Rome's present condition: how the real estate business has fallen into the hands of the large national banks, which are now outrageously bleeding the public by keeping the supply small and the rents high by holding building sites at prohibitory prices. An unfurnished flat of average size cost \$500 to \$1,250 per annum in the time of Cicero.

One way of evading the law was to give the houses a greater height in the rear, while keeping within the legal limit on the line of the main street.

One inscription mentions a house with ten shops and six stories of apartments above. The Middle Ages, with their low houses, form, indeed, a break between Rome and modern times!

The tenement described by the poet-satyrst Martial, in which a poor man goes up some 200 steps to his room in the garret, must have been over 100 feet high; and this estimate is confirmed by Tacitus, according to whom the roofs of many houses around the base of the Capitol hill were on a level with the area of the temple of Jupiter on its summit, which would be about 100 feet. We also read that from the upper stories of some houses around the Palatine hill the people could overlook the apartments of the imperial palaces.

While these measurements were presumably uncommon, it is certain that Rome anticipated us in the field of skyscrapers on a large scale, and the average house was much higher than in any modern European city, where the limit is, as Lanciani remarks, 36 feet for Berlin, 45 feet for Vienna, and 63½ feet for Paris.

The fact was commented upon by ancient writers, showing that it was something peculiar to Rome. Strabo says that Roman houses, even in his day, were often 70 feet high. A contemporary of Antoninus Pius (c. 145 A. D.), the writer Aristides, borrowing a favorite arithmetical comparison of us modern Americans, says that the houses of Rome were so high that if they were lowered

to a single story and placed end to end they would form a continuous line across the peninsula from Mediterranean to Adriatic. And yet, before that, a law of Trajan (c. 100 A. D.) had still further reduced the maximum legal height of new houses on the street line to 60 feet, confirming Nero's enactment.

As the number of private houses and palaces in Rome, even at the close of the Empire, was less than 2,000, compared to nearly 50,000 apartment and tenement houses, the percentage of high buildings must have been great, especially as the private ones were supplemented by public structures, sometimes between 100 and 180 feet high.

Nor must it be imagined that the houses of the aristocracy were usually of as little as two stories, like Hellenic and Hellenistic houses, and like those at Pompeii; for the best preserved ancient palace in Rome, now incorporated in the Church of SS. Giovanni e Paolo, had at least four stories.

MUNICIPAL IMPROVEMENT IN ROME.—The progressive improvement in the municipal architecture of Rome, through the co-operation of enlightened emperors and architects, which, commencing just before the time of Cicero, crystallized under Nero and culminated under the Antonines, was probably due largely to the influence of the cities of Asia Minor and Syria, where many cities had become marvels of symmetry in plan and of beauty and perfection in construction. Intelligent men, like Strabo, in the time of Augustus, admired intensely such beautiful late Greek cities as Rhodes, Cyzicus and Massilia, where all structures were under the care of official city architects. More impressive still were the Antioch of the Seleucidae and the Alexandria of the Ptolemies, from which the Romans borrowed their long lines of porticoed avenues. Still, it can hardly have been from these cities that Rome obtained its scheme of high apartment houses, because, owing mainly to the fear of earthquakes, their houses seem hardly ever to have exceeded two stories in height. Perhaps the Romans copied this type from the Phoenician architecture of Sicily and Africa, for long be-

fore the time of Cicero, Diodorus mentions eight-storied houses at Motya, in Sicily, and there were houses at least six stories high at Carthage.

It is almost paradoxical, but true, that not until after Nero's fire did Rome begin even to rival in the beauty and regularity of her streets any one of a hundred among the cities of the world that she had been conquering for over two centuries. It was then that, with the help of Hellenic architects, the Romans passed from the elementary stage of erecting single public buildings, often of great individual beauty, but without relation to the city as a whole, to the more advanced stage, familiar for several centuries to Greeks and Orientals, of the city as an organic thing of beauty. It was then that the really constructive work of Roman architects commenced, and that they began to develop their remarkable talent for composition, grouping and elaborate combinations of plan. The Roman system gradually absorbed the neo-Hellenic architectural genius which, once saturated with the idea of using the Roman millions for the development of civic and private luxury on a large, practical scale, rose to its task with enthusiastic vigor throughout the Empire. The rage for building that reigned from Trajan (97 A. D.) to Alexander Severus was an extraordinary phenomenon. When it ceased with the disorders of the middle of the third century and the first barbarian invasions, the profession of architecture quickly lost its vogue and its skill. So that when Diocletian and Constantine sought to resuscitate the culture of the Empire one of their tasks was to stimulate the profession and increase its membership.

PRIVATE ARCHITECTURE: ARCHITECTS.—It is in the field of private architecture that we glean our most vivid pictures of the personal activity of the architects of the late republic and the Empire, and it is to Vitruvius again that we must refer for a picture of the Roman house and villa which would be out of place here.

In connection with this, we will merely note the care in the orientation of houses, so as to secure the best results,

both in winter and summer. Vitruvius makes himself the national mouthpiece when he says that "natural consistency (one of the necessary attributes of a good architect) requires that bedrooms should be lighted from the east; baths and winter apartments from the south-west; picture and other galleries, which require a steady light, from the north," etc. In large houses, and especially in villas, architects generally provided separate summer and winter suites, both bedrooms and sitting rooms. In all such matters Greek and Roman architects and their clients seem to have been more advanced than we are even at present.

The two other main novelties—beside the increased spaciousness made possible by the adoption of the two courts in a single line, in place of the one court of the Greeks and earlier Romans—were the private baths and the perfect system of heating and plumbing, including the warming of partitions and floors. Of the innumerable examples, one of the best is the villa at Boscoreale, near Pompeii, where the wonderful silverware was found that is now in the Louvre. Its two superb bronze bathtubs, however, are in the Field Museum at Chicago.

All the main points, including the values of city and country houses, the method and time of building, and the relations of owner to architect, are illustrated in the correspondence of Cicero, from which I shall allow myself to quote quite liberally.

CICERO AND HIS ARCHITECTS.—In 44 B. C., Cicero wrote Atticus, his great friend and artistic adviser, of his intention to build a monument to his much-lamented daughter Tullia from the designs of Cluavius, one of his customary architects. He takes occasion to speak very highly of current architectural knowledge and skill; undoubtedly his generation saw the transition from old Roman simplicity to a gorgeousness and finish that heralded Augustus. He also speaks of a freedman of Balbus, named Corumbus, as a skillful architect. If we name Chrysippus Vettius, a freedman and pupil of Cyrus, Cyrus himself, Philotimus and

Diphilus, we have four or five architects employed by Cicero on his 21 houses and villas. This made him quite a patron of architects. That his relations to Cyrus were particularly close, and that he respected his learning, is shown by a letter to Atticus, where he says: "When you find fault with the narrow windows, let me tell you that you are criticising the 'Cyropædeia.' For when I made the same remark, Cyrus used to answer that the view of the garden, through broad lights, was not so pleasant. For let a be the eye," etc. (follows an optical demonstration).

Several passages bear on the value of houses. He wrote to Atticus, in 68 B. C., that the house of Rabirius, in Naples, which Atticus had thought of buying and transforming according to drawings which he had had made, had been sold for 130,000 sesterces (= c. \$5,000). This must have been a small and modest house. In a letter to Sestius, in 65, he refers to his own purchase of quite an expensive mansion in Rome, that of Crassus, the famous friend of Cæsar and Pompey: "I have bought that very house for 3,500,000 sesterces" (= c. \$140,000). Soon after he speaks of another palatial house, in writing to Atticus: "Consul Messala has bought the house of Anthony for 3,400,000 sesterces." We are familiar with the fact that Cicero feathered his nest. Though a "new man," his lawyer's fees were so enormous as to enable him, in his early hey-day, to make extensive real estate investments, including houses and villas at Rome, Tusculum, Formiæ, Pompeii, Arpinum, Cumæ. When he went into exile, in 58 B. C., his town house was destroyed and his villas at Tusculum and Antium dismantled through the efforts of his enemies. When he was recalled from exile he, of course, put in heavy claims for damages, and complains of the result. "The buildings of my house," he says, "the consuls, by the advice of their assessors, valued at 2,000,000 sesterces (he had paid Crassus near twice this amount for it). The rest was valued very stingily. My Tusculan villa at 500,000 sesterces, my villa at Formiæ at 250,-

000 sesterces." He decided to repair the villa at Formiæ, but he advertised his Tusculum property for sale.

At this period of Cicero's life, in 56 B. C., when he was superintending the reconstruction of his own property and of that of his brother Quintus, we get a very clear picture of how building was carried on. On January 18 he writes his brother: "About your building, I do not fail to press Cyrus. I hope he will do his duty." This Cyrus was, we see, the favorite architect of Cicero (*pro Mil.* 17, 18; *ad fam.* 7, 14; *ad Q. fr.* 2, 2; *ad Att.* 2, 3), whom he quite frequently mentions. In March he reports progress: "The building of both your house and mine is being pushed on energetically. I have caused half the money to be paid to your contractor. I hope before next winter we may be under the same roof. * * * I am building in three places, and patching up my other houses. * * * If I had you with me I should give the builders full swing for awhile." A few weeks later (April 8), he writes: "After leaving your boy, I went to the site of your house; the building was going on with a large number of workmen. I urged the contractor, Longilius, to push on. The house will be splendid, for it can be better seen now than we could judge from the plans. My own house is also being built with despatch."

Early in the next year his own house in Rome was not yet completed, for he writes to Atticus in Rome from his villa at Cumæ: "I wish you would come and see my walk and bath (*laconicum*) and the buildings planned by Cyrus, and would also urge Philotimus to make haste that I may have something to match with yours." (P. was in charge of the rebuilding of Cicero's house.)

Most amusing and interesting of all is the report he sends to his brother Quintus in 54 B. C., about one of the latter's new villas: "In your Manilian property I came across Diphilus, outdoing himself in dilatoriness. Still, he had nothing left to build but the baths, a promenade and an aviary. I liked this villa very much, because the paved colonnade (around its atrium) gives it

an air of great dignity. I never appreciated this till now, when the colonnade has been opened up and the columns polished. Now all will depend on the stuccoing being properly done. * * * The pavements seem well laid. Certain ceilings I did not like, and ordered changed." He does not approve of his brother's order that a small entrance hall should be made in connection with the atrium, which is too small to allow of it. "As it stands, from the very beauty of its arched roof it will serve as an admirable summer room. * * * In the bath I have transferred the hot chamber to the other corner of the dressing room, because it was so placed that its steampipe was immediately under the bedrooms (which would have made them too hot). A fair-sized bedroom and a lofty winter room I admired very much, for they were both spacious and well situated on the side of the promenade, nearest the bath.

"Diphilus has placed the columns out of the perpendicular and not opposite each other. These he shall, of course, take down. Some day he will learn how to use the plumb line and the measuring stick. On the whole, I hope Diphilus' work will be completed in a few months; for Cæsius, who was with me at the time, keeps a very sharp watch upon him."

It is evident that Quintus did not know his own mind, and was as prolific in changes after the specifications and estimates were in as some irritating moderns are. Cicero tells how a most well-meaning steward of his had contracted to do a little building for Quintus at Laterium for 16,000 sesterces (\$640), but had to give it up because Quintus kept ordering additions to the work, but none to the price.

It was not until 54, after three years, that Quintus' house in Rome was completed, as Cicero reports in September. The part of the roof over the sitting room, which Quintus did not wish covered with several gables, was roofed so as to slope gracefully toward the lower colonnade of the court. He is loud in his praise of Quintus' place at Arcanum, fit, he says, for a man of even better

taste than Cæsar, and worthy of an architect equal to many Philotimuses, "and quite above your Diphiluses."

When, after Tullia's death, in 45, he made such elaborate plans for a memorial temple and park to her, he wrote to Atticus, "As to the design, I do not feel any doubt, for I like that of Cluattius," so that we may infer that several architects had submitted drawings to him. He asked Atticus to settle the contract for the columns with a certain Apella, of Chius. At the same time he got from another of his regular architects, Chrysippus, a report on a certain site for it, including villa and grounds. It would seem that grounds close to the city were then valued in some cases as high as \$700 and more per acre.

PRIVATE CONTRACTS.—We may conclude from these letters and others that at this time there were usually three persons interested in any construction: the architect who drew up the plans and oversaw the operations; the contractor, who did the work usually for a lump sum; the business agent of the owner. We may also conclude that sometimes the owner or architect took charge of purchasing the materials and got along without the intervention of any contractor, the architect overseeing the workmen who were engaged by the day. When a contract for building was drawn up it sometimes was made for a lump sum to include all costs for both labor and material; at other times it was for labor only, the owner making separate contracts for the materials.

In the present scarcity of documents, it is impossible to say which was the prevalent method of contract. All that can be done is to ferret out the few examples of the various methods.

A current formula is found on certain waxed wooden tablets found in Dacia, which also illustrate the perishable form of these contracts and explain their disappearance. The formula would run about as follows, in the fragmentary form that is alone preserved:

"Consulship of Laelianus & Pastor, Kalends of November. L. Ulsius Valerius affirms that he does give and has given to Socraton, son of Socrates, the

contract to carry out certain work for him from this day till the Ides of September of the coming year. The payments to be made at the times agreed upon. If the contractor decides to stop work without the consent of the owner he shall pay * * * sesterces for each day that no work is done. In case the weather should prevent work, this should be reckoned him *pro rata*. If, when the work is completed, the owner shall delay payment, he shall be held to the same penalty after the lapse of the customary three days."*

From the *corpus* of Roman law, in regard to private contracts, we glean a few facts which seem to show that the interests of the owner were particularly—almost tyrannically—guarded, at least in the late Empire. If the work is not completed at the time specified the owner is allowed to reassign the contract. When the work is done the owner appears to be given full power to accept or reject it without control. One of the reasons that would give him the right to do so would be if the contractor used lime less than three years old, which was contrary to law.

The legal regulations governing private contracts can be summed up as follows: The private contract was derived from the earlier contract formula for public works. In early times, before so high an artistic standard was required, a large part of private work was done by mercenaries, which was afterwards given out by contract. It was not always done for money, either, but sometimes on shares, or with payment in kind, or in the form of free rent. This was still often the case in the time of Cato. When the payment is in cash it shall be made in several installments, either at the close of the work or during the course of it, as such or such parts are completed and accepted by the owner.

In assigning a contract, the owner sometimes opened a competition of bids, as the censors did for public works, and assigned it to the lowest bidder. Meas-

ures were taken to prevent fraud on the part of contractors, such as coming to an understanding with each other to raise the limit of the bids, the successful contractor taking the others into partnership afterwards. They can be required to clear themselves from this charge under oath. The work must be done within the time specified and in a faultless manner. The contractor is not obliged to actually do it himself, but he is responsible for his associates and helpers. He ordinarily uses the materials furnished by the owner. In case he furnishes the materials himself, the contract falls under quite another head—under that of *sale* instead of *lease*, though this difference was never made in the case of private houses. The acceptance, either total or partial, of the work by the owner discharges the contractor of all responsibility and risks. Until then the contractor is responsible for damage or destruction, unless he can prove it the fault of the owner.

FORMULA OF CONTRACT.—It is from Egyptian sources that we are beginning to glean information in this field of Roman antiquities, through the papyri. Here is a private contract for supplying quarried stones for a house, made in the time of the Antonines between two stonecutters and the owners at the city of Oxyrhynchus:

"To Antonia Ascelpias * * * through her guardian, Apollonius, from Asclas, son of Alexander and Apollonius, son of Amois, both of Oxyrhynchus. We undertake to cut the squared building stones of one camelweight from the northern quarry required for the house of you, Antonia in the quarter of Pamene's Gardens, the rate of payment for the stonecutting being: (1) for the outside camel-stones at 4 drachmas per 16; (2) for the inside do. at 4 drachmas per 30; (3) for *anti blēmata* at 3 drachmas per 100 squared camel stones; for oblong corner stones; (4) for outside squared camel-stones at 8 drachmas for 16 and (5) for inside squared camel-stones 8 drachmas for 30; for stones worked only with the axe [for foundations?]; (6) for squared camel-stones at 4 drachmas

*In the lost parts there must be some penalty for the contractor who does not complete the work on time.

for 50 and (7) for oblong corner camel-stones at 8 drachmas for 50.

"All the aforesaid kinds of stone we will cut, but no ornamentation shall be required of us. Each of us shall receive for each day that he works both a loaf and a relish.

"If the builders have need of our services in stone-cutting we shall be called in, either one or both of us, and shall receive as daily wages 4 drachmas and also each day a loaf and relish.

"Up to the 22d day of the present month Epeiph you have the right to transfer to others this contract for cutting the aforesaid squared camel-stones from the northern quarry."

WORKMEN AND GUILDS. — During these centuries of the development of Roman architecture what was the condition and organization of the men belonging to the building trades employed by the architects and contractors or engaged directly by the State or private individuals or working as slaves?

The answer is bound up in the totally different way in which the Roman mind and Roman law regarded the organization of society from what had been the case in Greece. The Greeks left everything to individual effort; in Rome everything was done by collective organization.

An ancient tradition relates that the populace of the Roman tribes was divided by King Numa into labor corporations according to occupation; of these the men belonging to the building trades formed one, under the general title of *fabri*, or later *fabri tignarii*.

All the members of these corporations were free men, *Roman citizens*. It was not until after the Punic wars, when the population of Italy had been so decimated, and agriculture and other forms of labor so neglected for war, that *slave labor* was introduced as a necessity.

At first slave labor revolutionized life only in the country, on large private estates and those of speculating contractors; it then affected mainly the commoner forms of labor. But quite soon it invaded the cities and Rome itself, pervading the arts and trades; especially when, with the conquest of Southern

Italy, Sicily, Greece and the Orient, there came into every wealthy Roman establishment a considerable number of Greek slaves, with their knowledge of the arts and sciences, their general education and refinement.

I have already said that men like Crassus had an organized army of artists and artisans, sufficient for every branch of human activity that might be required on his immense estates; and with many owners the hiring out of skilled slave-workmen was a regular business.

RESTRICTION OF RIGHT OF ASSOCIATION.—With this changed state of affairs the old labor corporations of free citizens lost both influence and dignity. They also became, in the last days of the Republic, hotbeds of political corruption and sedition, wooed for their votes by demagogues such as Milo and Catiline.

Until then the State had allowed perfect freedom of association, but the political dangers of its abuse became evident. So Julius Caesar, in his radical reform of the State, framed a law restricting the right of association, leaving in existence only a certain specified number of associations subject to government sanction and supervision. Augustus followed, as usual, the same policy.

What we cannot understand, however, is why, long after the Empire had become consolidated and republicans and socialists as extinct as the *dodo*, the Emperors should have continued to look upon such associations with suspicion. Even the self-confident Trajan (97-117 A. D.) objected to the organization of a fire brigade in a city of Asia Minor because he considered that such societies were made the pretext for political intrigues.

GOVERNMENT CONTROL OF GUILDS.—Another century, however, had hardly elapsed when we find a radical change of policy. Perhaps the Emperors had found it impossible to undermine the corporations; perhaps the less thoughtful and firm Emperors of the early third century preferred to close their eyes to abuses in view of the usefulness of the corporations to the State. The new

Oriental policy of these Emperors favoring centralization and government control in every sphere of activity was applied here also. A scheme was adopted that not only favored the formation of associations but gave them a monopoly, each in its field, in return for services to the State.

It seems probable, from historical texts, that the large corporation of the building trades (*fabri*) was the first to receive the privileges of monopoly and of immunity from taxation in return for gratuitous work on public structures. This may have been done, as an exception, as early as the reign of Antoninus Pius. But as a proof that this was a real exception we find that, fifty years later, Alexander Severus was still collecting from other corporations a tax the proceeds of which were used to keep the public baths open earlier and later by artificial light. Soon after this, however, the scheme of exacting labor or material for public works and public service from each corporation became a settled policy.

What we would call the "books" of all the corporations were open for government inspection, and there was a great deal of special legislation to regulate them. It was not only made impossible for a man to work at any trade, art or business unless he belonged to a corporation, but once he had joined it he was bound hand and foot. By the close of the third century imperial restrictive legislation had so enmeshed and enslaved the corporations that a member was not only forced to remain in his corporation for life but forced to reside in the city where he had joined it; if he went anywhere else he could be brought back by force.

The member was not only himself bound for life but he was obliged to teach his sons this particular business and no other, and so on "unto the third and fourth generation." Hence, heredity of occupation was erected into a state dogma and law.

By the close of the fourth century the climax had been reached of this enslavement of free labor.

ORGANIZATION AND ADMINISTRATION.—The corporations were organized in imitation of the city government. Certain measures were taken and elections held by an assembly of all the members, called the "people," the "order." But these members were organized in quasi-military divisions of ten (*decuria*), with a leader called *decurion*, and every ten of these divisions formed a section of a hundred (*centuria*), under a leader called *centurion*, assisted by a lieutenant (*optio*). These special divisional officials were elected annually, as a rule, by each group of members.

The general officers were a president and a treasurer. They were elected by the assembly of the whole and served for periods varying from a month to a year; sometimes, even, for a term of five years. The treasurer's office was exceedingly important, for he received not merely the dues but the large special donations. The principal assets came, in fact, from patrons belonging to the moneyed classes, though there seem also to have been land grants from the State. As in earlier days, the crowds of the proletariat had followed demagogues and distributors of political plums and boodle, so now, in the peaceful times of dead politics, there were plenty of rich men anxious to buy cheap notoriety by becoming titular patrons, honorary protectors—we might say trustees—of these corporations; and in return for their large gifts, inscriptions, busts and even statues transmitted their names to posterity at the expense of the corporation!

WAGES.—The best index of the artisans' wages is given toward the close of the imperial period in the famous Law of the Maximum Price, issued in 301 A. D. by that great centralizing organizer, the Emperor Diocletian. Its general purpose was to counteract speculative attempts to artificially influence the market values of natural and manufactured products of labor, to prevent "corners" and "trusts."

What concerns us in this epoch-making economic document is the small section that refers to the building trades, for here we find what must be a fairly

complete list of the guilds or at least of the branches into which the arts and crafts were divided, with the salaries that each man should receive in daily wages. It is stated that he must be given his food *beside* the wage. The daily wages follow:

| | |
|--------------------------|--------|
| Common day laborer..... | \$0.30 |
| Mason | 0.60 |
| Lime-maker | 0.60 |
| Plasterer | 0.60 |
| Carpenter | 0.60 |
| Cabinet-maker | 0.60 |
| Marble-worker | 0.75 |
| Mosaicist | 0.75 |
| House-painter | 0.85 |
| Decorative painter | 1.80 |

This chapter of the law is entitled *Workmen's Wages* and regards only common operatives. There is no thought of regulating the remuneration of artists such as sculptors, much less the "honorarium" of architects, though, as I have already shown, when an architect became a public teacher of his art his professional charge for instruction was regulated.

One of the above classes of artisans, the *marmorarius* or marble worker, was practically unknown to the Greeks. He was a Roman creation due to the Roman plan of separating the surface decoration from the structure and applying it afterwards, usually in the form of slabs and patterns of brilliant marbles, both on the outside and inside of buildings; and the same class of artisans produced the wonderful mass of decorative work in marble furniture, such as candelabra, vases, altars, tables, tripods, which impinge so often on the field of pure art.

The marble-decorators were indispensable to the architect, and grew in importance as the Empire progressed and as new varieties of rich marbles and of ways of using them became popular. This popularity even affected the contracting business. Sometimes, as in the case of the basilica at Nîmes, there was a single contractor for both the stonework (or other form of construction) and the marble decoration; but in other cases there was a special contractor for the marble decoration, as at Pozzuoli,

where an inscription names C. Avillius December as the contractor for this decorative work (*redemptor marmorarius*). Several tombs of these artists remain. On one, near Reggio, the artist has his implements: level, square and plum-line between two mallets.

The logical outcome of increasing centralization and monopoly was that finally, perhaps before the reign of Diocletian, contracts with *individual* artists and artisans were largely replaced by contracts with their *guilds* in the building business. It is impossible to say whether this was universal throughout the empire, and how far it affected private as well as public contracts. At all events, it seems to have largely characterized the business of the government, which wished to not only drive all men into the corporations but to make them part of the immense network of government machinery.

The Egyptian papyri afford several instances. In 316 A. D. at Oxyrhynchus the city administration made a payment to the Guild of Ironworkers for materials used in the public works. In the same year the Guild of Carpenters of the same city reports, through its monthly president, to the city magistrate on a detail of municipal improvement. As late as 569 the chief of the Guild of Stonemasons contracts to transport a certain quantity of stone for one Flavius Apion. This document shows that private persons also dealt with the guilds directly.

We can now sum up more intelligently the significance of the art, personality and methods of Roman architects in comparison with those of their Greek predecessors and of our own country.

In a way, they strongly resemble our architects. They were practical men. They were obliged to be versatile in their style and in their use of materials; to know how to handle brick, concrete, stone and wood; to use both arch and architrave, separately and together, to combine flat and arched coverings of every form. They found it necessary, quite often, to study past historic styles to suit the catholic taste of their traveled patrons; not only early middle and late

Greek styles, but those of Egypt and the Orient. When the architects of Hadrian built his villa at Tivoli, with its reproductions of famous historic buildings in various countries, they had just returned from accompanying him on a tour of the civilized world in which architectural construction and study had played an important part. Accustomed to concrete and brick in Rome, for instance, they were forced to use quarried stone in Syria and North Africa.

In this way they cultivated adaptability at the expense of sincerity; were less stylists than students, and their products less a natural growth than an intellectual product. This was in direct contrast to Greece, with its simple unity, and its dependence on national genius.

Another point of similarity with our conditions is that their architecture was not mainly idealistic and sacred, as that of the Greeks had been, whose civic and private structures had been so simple.

The Roman masterpieces were not temples like the Parthenon, nor oracles like Delphi, Olympia and Eleusis, but varied works of public and private utility, comfort and display, harmonizing with the more than Oriental luxury of the Roman Empire. In doing this they carried to a higher degree than any previous style the genius for a harmonizing of buildings with nature and landscape architecture. This is what we are beginning to understand, though less than the English or the Italians.

But a field in which the Romans were quite as supreme was that of the harmonious use of the plastic art and of color in connection with building, especially with interior decoration. The Greek color sense, much as it grieves one to confess it, had been crude, and the attempts to use it in connection with sculpture and architecture inartistic. Even Greek plastic decoration was less exquisitely, less unobtrusively done than



ROMAN DECORATIVE STUCCO.

it was in Roman times. Anything more charming as surface decoration than the sketchy stuccoes of which bits are known to us from Nero's Golden house, the Farnesina, and the tombs of the via Latina, it is difficult to imagine.

The same taste prevailed in the use of color, from the rich slabs of African marbles and the marble incrustations of *opus sectile* cut in patterns, to the varied wall pictures of which those at Pompeii show us only the cruder artisan forms, while the fascinating impressionistic garden scenes in Livia's villa, at Prima Porta, near Rome, are the handiwork of genuine artists. The fact is, that under Roman guidance the close union of the various arts, even though they were increasingly differentiated, was not only maintained but emphasized. We must not, however, forget to ascribe to the Hellenic element in the movement much of the taste in the execution.

It is in this unity of the arts that any comparison of Roman architects with our own breaks down. The fundamental disorganization of the arts in America for which, it is true, the men of the fifteenth and sixteenth centuries are ultimately responsible—which the clear-sighted among us are beginning to deplore, can be remedied, of course, only through broader artistic education and inspiration. As far as example can help, to study what we know of Roman work would be more useful than that of any other period in the history of art. But its fragmentary remains require editing and reproduction to be properly usable.

At the same time, there are some Roman pitfalls that we ought to avoid, though we seem to be falling into more than one of them. The first and worst was the enslavement of the workman to the union and the state, and the consequent gradual loss of artistic excellence in every kind of detail requiring an eye for line and color. A dead level of price and of work was brought about, as it is being brought about with us. The second was the irresponsibility of architects in the matter of estimates, the slackness of his supervision of the contractor's work, and the speculative tendency of contracts.

These conditions favored "ready-made," "cast-in-the-mould" effects, especially in the lines and details of pure architecture, which increased as architects got more and more out of touch with the actual work. It is strikingly illustrated in the fact that in mere constructive genius the men who designed the buildings of the third century of our era, such as the baths of Caracalla and Diocletian and the Septizonium of Septimius Severus, were, if anything, superior to their predecessors, while all the execution of details had grown careless and inartistic and got steadily worse.

In striking a balance, we must agree with Ferrero that Rome presents us in this field, as in almost every other, with the most universal forms, and that in its treasure-house we can find practically all the elements that we require if we have the talent to perceive and transform as well as the genius to conceive.

A. L. Frothingham.

MR. J. W. BROWNIE,
Care Editor "Architectural Record,"
New York City.

DEAR MR. BROWNIE:

It was with delight that I read in the "Architectural Record," of February, that we have in the architectural profession a member of the distinguished family of "Brownies." Palmer Cox is to be congratulated upon the striking pictures that he has made of you. Yours is perhaps the most irresistibly funny of them all. It is true, as you say, "everybody cannot be a genius," but it is given to but few to be so amusing.

Your pathetic appeal for assistance fills me with deep sympathy. You were doubtless, as were most of us, confused by the metaphorical but now historic *Philadelphia tulip*, and it is not surprising that you cannot see the slightest resemblance between it and the architecture of America. When you were taken "*among these almost cloistral surroundings, where the student goes to laugh, the water jet springs serenely, and Pous-sin and Puget stand calmly oblivious of the entrance gates*, you were perhaps as much involved in the mixed metaphors and allegories as was the writer himself. You naturally ask, What has all of this to do with the "beautiful three-quarter engaged architecture which is now clinging to the fronts of our buildings, like Michael Angelo's painted architecture to the ceiling of the Sistine Chapel." Or the wonderful Alladin architecture done by the advocates of the French teaching, while the learned professor rubs his wonderful lamp, which is changing our country into a comical caricature of the Acropolis. Which, in the words of one of the most distinguished advocates of the Academic French School, "*have given to us those splendid monuments which make beautiful palaces of department stores, and noble temples of places of money exchange.*"

You will doubtless some day go to Rome, where you will see the prototypes of the forms used by the students of the Ecole des Beaux-Arts in the past fifty years.

In studying a living art, however, avoid, above, all things, "*the eminent archaeologists and undisputed authorities on everything which pertains to antiquity.*" They are but storehouses of musty bulbs, and not growers of tulips. You would naturally expect from one of these remarks as absurd as "*the last word in art was said, when, in the fifth century, before our era, the Parthenon sprang from the rocks of the Acropolis, like Athens in full panoply from the brains of Zeus.*"

It is too bad that we can find no one to answer our questions frankly, instead of trying to befuddle us with allegorical flights and quotations from learned writers, while others copy page after page of the descriptive geometry, with the avowed intention of protecting the dear public from misleading technicalities.

That Gothic phantom, which seems to haunt you, exists only in the narrow confines of slavish little brains, brains that never have, and never will think for themselves, but insist upon having someone else, preferably someone who is dead, think for them. These fellows, "Brownie," do no harm; they simply do no good. They make statements, and think that these settle the question. Substitute a negative for every positive, and a positive for every negative. Contradict every statement that they make, and you will find that you will have an argument for the other side, which has just about as much foundation of fact as the original. They accuse others "*of a want of sincerity and good faith,*" while through their whole argument runs a personal venom which suggests a small animal in a corner fighting for his own little existence.

Now, my dear "Little Brownie Architect," the public will take no further interest in architectural allegories. A joke is a fatal weapon in the hands of the artist, a veritable boomerang in the hands of the amateur. You who are in the front ranks of the inhabitants of Joke! and should remember this.

Most affectionately yours,
American Architect.

NOTES & COMMENTS

PENNSYLVANIA STATE ASSOCIATION OF ARCHITECTS

Delegates from the State Chapters of the American Institute of Architects and other members from Pennsylvania came together in Harrisburg recently and formally organized the New Pennsylvania State Association of Architects, which promises to be a powerful factor in advancing the interests of the Institute and the profession and many matters concerning the welfare of the State. This is the only State organization of the American Institute of Architects. The following officers were elected:

President—D. Knickerbocker Boyd of Philadelphia, President of the Philadelphia Chapter of the Institute and Fellow of the American Institute of Architects.

Vice-President—Edward Stotz of Pittsburg, President of the Pittsburg Chapter of the Institute.

Secretary and Treasurer—Wm. L. Bailly of Philadelphia, architect and a member of the Academy of Natural Sciences.

After discussion of matters relating to bills now before the state legislature and of other matters of general welfare, the association put itself on record as favoring—the report of the Fine Arts Council recommending that the proposed Lincoln Memorial to be erected in the National Capitol be upon the site at the end of the Mall as originally provided for, and the passage of Senator Newlands' bill now before Congress to create a Bureau of the Fine Arts. A general discussion took place on the advisability of studying and revising the building laws of the entire State of Pennsylvania to conform to all modern conditions of construction and materials used. It was pointed out that in many of the cities of the state, particularly those of the second and third classes, the laws under which buildings are erected are not only inadequate, but antiquated. The creation of a committee to go over the matter and bring it before the attention of the next session of the legislature with a view to having a commission appointed to revise and codify the building laws of the State was authorized. Amongst other matters discussed, but upon which no definite action was taken, was the registration and licensing of architects. The

matter of the appointment of an art jury for the city of Philadelphia as authorized by act of legislature, was also taken up and referred to a committee.

EVENING COURSES IN ARCHITECTURE

The students of the Evening Courses in Architecture at Columbia University have banded themselves together for the purpose of extending the scope of their work. To further their purpose they have secured the interest of Mr. Louis E. Jallade, who has consented to give them the benefit of his instruction. The atelier is located at 218 East 42d Street in New York, where the work will consist chiefly in the solution of the problems published by the American Society of Beaux Arts Architects. The efforts of this society are to be highly commended for what it has for some years been doing to afford a measure of training to those draughtsmen who are unable, for one reason or another, to take advantage of a regular university course in architecture.

PRIZE DESIGNS FOR AN EXHIBITION

In the competition for laying out the site of the Housing Exhibition in Swansea, England, more than eighty plans were submitted. The gold medal was awarded to James Crossland, an architect, of Broughton-in-Furness. The silver medal went to Gilbert Waterhouse, an architect, of Buckhurst Hill, Essex. This, the judge declares, was because of the exceptional architectural merit of his design, for some of his side roads did not fully accord in width with the by-laws, and he provided too small a frontage for the cottages. The third prize was given to W. John Aldiss, an architect, of Newbridge, Monmouth. With regard to the premiated design, the judges commend "the consideration it displays for the contours of the site, the economical arrangement of roads, the treatment of the aspect, the possibilities of picturesque treatment in town planning, and the general practicability of the design for the purpose of the cottage exhibition."

PORTLAND ARCHITECTURAL CLUB EXHIBITION

The second annual exhibition of the Portland Architectural Club opened in the galleries of the Museum of Fine Arts in Portland, Oregon, on March 22, and is to continue until April 10. The exhibition is to be made the occasion for entertaining and bringing together delegates from the coast towns with a view to forming a Pacific Coast League of Architecture to be affiliated either with the Architectural League of America or the American Institute of Architects.

ARTISTIC HOMES FOR GERMAN WORKERS

In Germany, as well as in America, the English example has been followed by the forming of a Garden City Association. An account of Helleran, near Dresden, supported by the German Art Workshops of Dresden, is given by the chairman of the association in a recent number of the English Garden City Magazine. The site includes an area of one and a quarter million square yards. "If we reckon on an average of 700 square yards for a house with a single family, together with the street frontage and garden appertaining to it, then it would be possible to erect some 2,000 houses for about 8,000 inhabitants. Hills, dales, meadows, fields and woods provide the architect with the best basis for the artistic modeling of the new settlement." While the shops have adopted the policy of leaving to the associated workmen themselves the construction of the houses, they yet exert great influence on the artistic aspects of the enterprise. "The sketches," says the writer, "for the general building plan, for the factories and first dwelling houses, have been carried out by R. Riemerschmid. The streets conform to the lie of the hills in delicate curves, and present to the architects who will be building here the best opportunity for making charming city pictures. Near the workshops stretches out the quarter occupied by small dwellings, in which the houses belonging to single families are united in groups and rows." Further out, extensive quarters for country houses are provided. "Here for the first time," he says, "an artistic and social community ought to arise, in which the beauty and fitness of the individual houses contribute to a complete unity. In order that the colony may present a united whole, every design must receive the approval of a

committee of artists before it is carried out." It is remarked by the writer that "the inhabitants of this Garden City, which is to carry out such lofty artistic aims, will be for the most part art-workers." And the artistic culture of the community is to be helped in other ways. The workshops propose to remove to Helleran the educational institutions which they have established in Dresden, and there has been planned a very elaborate course of musical instruction. There are, too, proposed baths, places for games and sports, and a town hall with library, reading and assembly rooms and a restaurant. "Since the company is possessed of excellent organizing powers and the necessary money," says the chairman, "one is justified in cherishing great hopes for the enterprise."

CITY PLAN COMMISSION OF HARTFORD

The first annual report of the commission on the City Plan of Hartford, Conn., is a little of a disappointment. Perhaps this is due to unreasonable expectations, and the commission may have been wise in going slowly at first. The commission, it will be remembered, is local, is largely ex-officio in its constitution, and is a unique municipal experiment. It has exceedingly broad powers; but in its first year it did nothing in a really comprehensive way for the city plan of Hartford. Yet a good many questions were brought before it, and if nothing very spectacular was accomplished there still was proof of the value of such a board in the municipal government. The report notes a trip to "Upper New York" to study the general layout of the streets; it notes action with reference to an addition to the park system, with regard to the acceptance of certain streets; the consideration of a proposed illuminated sign ordinance, action with regard to curbing on the boulevard, the preparation of an ordinance regulating the planning of subdivisions, consideration of street extensions, public baths, and the formulation of a request for a Technical High School Commission, to be appointed by the mayor. Surely all of these matters were of a character which it was well to have considered by an expert board, which had before it not the local aspects only of the question, but its relation to the city at large. But it seems a pity that such a board should not have had prepared for it a general scheme, authoritatively worked out, of municipal development for Hartford, that should be its chart and compass in coming to decisions.

PITTSBURGH STUDIES IMPROVEMENT

As one of the direct results of the recent and widely discussed Pittsburgh Survey, there was promised to Pittsburgh in November a Civil Improvement Commission, and late in January Mayor Guthrie announced his appointments. In some respects the commission is unique. It consists of fifteen members, all local men, each of whom is to act as chairman of a sub-committee which is to take up in detail a special subject. At the same time the commission as a whole would maintain, it was stated, a central office, which would be the headquarters for information on all civic matters and a focus for the various agencies already engaged in civic work. H. D. W. English, a man who made a notable record of achievement as president of the Chamber of Commerce, is chairman of the commission. Mayor Guthrie, in addressing the members of the commission the first time they were called together, stated in these words his conception of the work before them. "The commission," said he, "should acquire accurate information in regard to existing needs, and work out a sane and constructive program for relief." He added the comment. "Too often improvements are delayed and unnecessary expenditures made, because work is done which produces no practical relief and sometimes has to be undone before beneficial work which should have been foreseen and planned for can be done." The membership of the commission is representative in the highest degree of Pittsburgh enterprise. T. E. Billquist, of Billquist & Lee, is the only architect appointed.

ARCHITECTURE FOR BOSTON COMMON

The Listener of the Boston "Transcript" has lately been speaking of the Common as "the superb Court of Honor" to the Back Bay and parks. He probably meant forecourt, but chose the other term as one which newspaper readers would be more likely to understand. At all events they did understand it, in several cases their imagination was fired, and there appeared a number of suggestions and letters regarding the Common's development, that it might serve more directly and obviously the function described. One idea was that there should be erected, near the Boylston-Tremont Street corner, as a balance to the Park Street church and

spire, a sort of Tour St. Jacques. Another, which comes also from an architect, was that if the Boston custom house were ever demolished, a possibility to be at least considered the writer thought, since congress has been contemplating for some years various phases of such a proposition, it would be well to re-erect the porticos of the demolished structure at the two main entrances to the Common. These columned porticos are nearly seventy feet high and are detached from the main body of the building. The Listener says: "More elegant ornamental entrances to the two main avenues of the Common could not be thought of. To be sure there might, perhaps, have to be some little changes made in the paths to adapt them to meeting all of the five spaces between the columns. If these grand old monoliths—the wonder of their day, half a century ago—are taken down, what possible use could be more fitting for them? It would give them something of a public character of their own, a new lease of life of public importance, far more so than if used as portions of any other new building." Incidentally, they would lend to "the Athens of America" a yet more Athenian, and very fine, character. These were the monoliths, by the way, that were drawn from Quincy by forty yoke of oxen, with all the country side along the road to watch their passage, and wonder at the greatness of the city. It would be like Boston, if the entrance suggestion were ever carried out, to add to the interest of the porticos by recording this on tablets.

REPORT ON COMFORT STATIONS

The Civic League of St. Louis has issued an illustrated pamphlet report on public comfort stations. The League's publications are usually good, and this is not an exception. It contains the results of an extensive study by the Street Improvement Committee, and it is addressed to the city Board of Public Improvements. In making its study the committee did more than investigate the local aspects of the question. It collected all of the available information from other cities, secured the opinion of more than 200 medical men in St. Louis, arranged a competition among the members of the Architectural Club for the best design for a station, and selected the most desirable sites for the first six stations in St. Louis. It reports "a very general movement in American municipalities to provide these much needed public conveniences;" and it pertinently notes that "Bae-

decker's Guide formerly started its first sentence descriptive of the cities of the United States, by the statement that there were no public stations for the comfort of the active thousands within their limits." Even a late edition, says the committee, describes the stations that now exist in New York and other large cities as "disgracefully inadequate in number, size and equipment." But there is improvement. Manhattan, New York, is given in the Report as having nine; Boston, twelve; Brooklyn six; Washington, two, with a third about to be started; Baltimore, Cincinnati, Cleveland, Detroit, Chicago, Seattle and Cambridge, Worcester, and Holyoke as all having made a start with at least one completed station each to their credit. The stations in Washington and Manhattan are reported to have cost on an average \$25,000 each, those in Brooklyn from \$14,000 to \$25,000, and others less. The estimates for the St. Louis stations are from \$15,000 to \$18,000. In the competition of the Architectural Club there were seven entries, and three of the designs are published; but the committee says all were good.

COMPETITION FOR AUTOMOBILE TROPHY

Mr. Robert Guggenheim has offered a trophy valued at \$2,000 to the winner of the automobile race from New York City to the Alaska-Yukon-Pacific Exposition in Seattle, Washington, which opens on June 1. That the trophy may be the finest possible product of the silversmith's art, Mr. Guggenheim offers a prize of \$250 for the best design submitted, to compete for which he accordingly extends to artists and designers generally an unrestricted invitation. All designs are to be submitted to Welford Beaton, care of the Alaska-Yukon-Pacific Exposition, Seattle. They must be in his hands by March 31, and should be accompanied by return postage. The designs submitted will be passed upon by a committee, which will be appointed by the President of the Exposition Corporation. The committee will award the prize and assure the return of

such designs as are accompanied by the necessary postage.

AMERICAN COMPETITIONS

The Tee-Square Club of Philadelphia announces the publication of the second volume of its collection of competitive drawings comprising the most important competitions of the past year with their programs of requirements. The editor of the work, Mr. Adin Benedict Lacey, an architect of Philadelphia, very pertinently suggests that the value of the collection would be enhanced by the addition of the reports of the judge or judges of award, setting forth the precise reasons for the awards as made. There can be no doubt that architects generally would greatly welcome such an announcement which must increase the satisfaction of the competitors with the decisions and ensure the utmost care in the preparation of programs.

It might further be suggested that the publication of the more important working drawings and the completed building, if possible, would add greatly to the value of work to the profession.

NEW PROBLEMS FOR THE AMERICAN ARCHITECT

As though the practice of the successful American architect were not already sufficiently varied, and complicated, new problems, not alone those which are incidental to our rapid commercial progress, but problems growing out of our recent territorial acquisition are making increased demands on his versatility and ingenuity. With the permanent occupation of our colonies there is bound to be considerable substantial building in which the American architect will be compelled to use new materials in new ways to satisfy new conditions and requirements. The new Porto Rican capitol, drawings of which are published in this issue, will illustrate some interesting facts with which the designer had to be personally acquainted, and by which he had to govern his design.